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BLACK URGES DEALERS TO DEMAND REDUCTION

After Hearing Address by Congressman, Tire Dealers Appoint Committee to Talk With Manufacturers About Price Policy and Longer Protection Period.

The reduction of tire prices, the extension of American territory on down to the Panama canal and the imposition of an import duty on non-American rubber to take effect six years hence were advocated, among other things, by Congressman Loring M. Black before a meeting of New York tire dealers held at the Pennsylvania Hotel on June 25.

The British rubber growers and the American rubber manufacturers have made such profits in the last eighteen months, Mr. Black declared, that rubber restriction should be abandoned and tire prices slashed without further delay. In fact, he advised the dealers to insist on an immediate price cut of a size commensurate with the drop in the price of crude rubber.

"You gentlemen are the contact between the public and the tire producer", said Mr. Black, "and you bear the burden of the complaints. Undoubtedly prices must be lowered. You cannot lower them but you can force the manufacturers. I think you should organize a committee, wait on the manufacturers and ask that the cards be placed on the table.

The address of the Congressman before the tire dealers was the main drawing card of a smoker given by the Greater New York Tire Dealers' Association. George J. Burger is president of the association and presided at the meeting.

Tire Dealers' Profit

The Congressman's data, amply supported by numerous newspaper clippings, began with Sir Henry Wickham and covered the usual ground down to the present time. The audience bore good-humoredly with the usual quota of inaccuracies until he informed them that tire dealers made a profit of $100,000,000 in 1925. Then the dealers had their first good laugh and the Congressman was set right on the real topic of the evening's discussion.

REPRESENTATIVE LORING M. BLACK
Who addressed tire dealers of New York City at their meeting on June 25 at Hotel Pennsylvania.

The possibility of one or more price reductions after July 1 without suitable protection to cover the stocks they have on hand was the thing really agitating the dealers and the opinion was freely expressed that in addition to declaring immediately a price policy for the next ninety days, the manufacturers should increase the usual period of price protection. Many dealers felt that the present situation placed them in a position of great danger and suggested that they were accordingly prevented from carrying the stocks that the motorists expected to find in their stores.

A committee was appointed to advise the manufacturers of the feeling of the dealers and to urge that the period of price protection be extended. The personnel of the committee included George J. Burger, L. A. Brown, Joseph Groth, William Jude and Louis K. Beller. Another meeting will be held at a later date at which the committee will report the result of its work.

COMPANIES ANNOUNCE CUT IN TIRE PRICES

Movement Led by Goodyear Soon Becomes General Throughout Industry—Second Reduction of Year Runs as High as 25 Per Cent—Decline of Inventories Expected.

As expected in many quarters, the Fourth of July holiday was followed by a drastic reduction in the price of automobile tires and tubes. The Goodyear Tire and Rubber Company announced a new list on July 5 and announcements by several other companies followed within a few hours. Reductions ranged up to 25%. Some companies which had not distributed a new list on July 6 had stated that one was being prepared. Kelly-Springfield, United States, Fisk, Goodrich and Dunlop were among the first to follow Goodyear's lead.

As usual, the price cut was different for the various sizes and types of tires in the line. Dunlop's reduction ranged from 10 to 25 per cent. Goodyear's largest cut was reported not to exceed 10% on casings and 20% on tubes.

The reduction was the second one to be made during the current year, a decline of 10 to 15% having been made last February. Taken together, the two cuts put dealers' tire prices back on the level which existed prior to the three increases made during the summer and autumn of 1925.

In announcing the lower prices for his company, L. C. Rockhill, sales manager of Goodyear, said that while tire production costs were still being based on rubber bought at levels higher than the present market, the reduction was being made early in order that the public might benefit by lower prices at the height of the buying season. The present decrease was said merely to anticipate reductions which would have been logical later in the year. The lower prices are expected to be effective in speeding up the movement of the high inventories of tires and tubes held by manufacturers.

Neither the securities of the companies nor the crude rubber trade was greatly affected by the price cut since it had been largely discounted before it was made.

Adoption of Balloons By Ford Aids Decline of Fabric Tires

As Low Pressure Casings Become Supreme in Original Equipment Field, Cross-Woven Fabric Tire Gives Way Before Many Qualities of Cords.

While the announcement that the balloon tire will hereafter be standard equipment on Ford automobiles apparently marks the final step in the supremacy of the balloon tire as original equipment, it appears also to sound the death knell of the fabric casing. Heretofore, balloon tire and rim equipment on the Ford has cost $25 extra, but in spite of that fact a big majority of the new Ford cars have taken to the roads shod with balloons. Now as they all more over into that category, the fabric tire will find itself still less in demand than during recent months when its weakness in the trade has attracted attention.

The balloon tire is the third in a series of revolutionary changes in the industry. The first was the adoption of the straight-side tire in place of clinchers for all but light cars. The second was the adoption of the cord tire in place of the fabric. And now the low pressure tire supplants to a greater degree the old high pressure type.

Each of these changes has been marked by three steps,—the first use by the car manufacturers, the complete or practically complete adoption by the same group, and finally complete acceptance by the public. As the balloon tire now enters the second stage, the fabric tire seems to be giving way completely before the cord. The rapidity with which the original cross-woven fabric tire is dwindling as an important factor in the American tire trade is a matter of surprise even to those who have long predicted the complete supremacy of the cord construction.

During the first four months of 1925, the tire manufacturers contributing figures to the statistical surveys of the Rubber Association produced 3,254,443 fabric tires of which they shipped 2,905,143 or a very high and comfortable percentage. In the first four months of the present year they produced only 40% as many fabric tires or a total of 1,354,916. However, shipments fell even faster than production for there was a demand for only 690,000 fabrics, or 23% as many as were sold in the early months of 1925.

Inventories of fabrics have accordingly increased by more than a half million casings. At the end of April there were enough on hand to last practically seven months at the rate at which they were demanded in April. Of the high pressure tires, the stock was equal to a 3.2 months' supply while there were enough of the popular balloons on hand to last only 1.5 months at the rate at which they were taken in April, which was unexpectedly low. The demand for fabric tires during each month in 1926 has been considerably less than for any month during the last several years.

The decrease in fabric tire business is not due to a general slump in the tire trade for during the months when production and sales of fabrics have been dwindling, the production and sales of high pressure and balloon tires has been well maintained. Production has been especially strong but it has not been the production of fabric tires. It is the balloon tire which has hogged the picture.

The fabric tire was of course on the way out as soon as the merits of the cord tire were proven but the decline had been quite gradual until the recent decided slump in production and demand.

Up until second quality cord tires were added to the lines of the best known manufacturers after the war, the fabric tire had and held a legitimate place in the trade for it served the motorist who needed to economize in tire expenditures or could logically use cheaper tires since his annual mileage was not so great. The advent of the "gyp" cord tire however forced the leading manufacturers to offer one or more lines of cord tires in addition to their standard, first-quality lines. Such tires immediately cut in on the trade that had regularly gone to the fabric tire. The decline of the fabric tire was hastened as the qualities of cord tires multiplied.

The fabric tire went further into the background when the balloon tire established itself since the greater flexibility demanded of the balloons kept cross-woven fabrics from being used in their construction.

The progress of the balloon tire is well known but its rapidity and completeness is not everywhere appreciated. In May, 1925, 67% of the rims inspected and approved by the Tire and Rim Association were for balloon tires; in May, 1926, over 81% of the new rims were for balloons.

The chief stronghold of the high pressure fabric tire has been in the clincher field. But that field is giving way before the balloon tire and rim also. In May, 1925, 21.6% of all the new rims were clinchers; in May, 1926, only 11% were in that classification.

The recent shift from clinchers to balloons has been largely a matter of the Ford car. Up until two weeks ago balloon equipment on the Ford cost $25 extra. That price has been standard since the first of 1925. It is remembered that many were amazed at the willingness of Ford buyers to pay the extra $25 to get the comfort of balloons. Within five months after the offer was made, it was reported that more than 70% of the cars turned out were on balloons.

Now balloon tires are standard equipment on the Ford. That means a decrease in the demand for clincher rims just as a still more rapid decrease in the demand for fabric tires is certain.

Silvertown Tour

The Goodrich Silvertown Cord Orchestra, together with its "silver-masked" tenor, will start from Boston in October on a concert tour which will take in most of the principal cities between the Atlantic and Pacific seaboards. Cities in Canada will be visited as well as those in the United States. A professional musical bureau is the booking. The orchestra has done much radio broadcasting and is known throughout the country.

FARRELL OFFICE STAFF ON ANNUAL OUTING

The annual outing of the office and engineering department of the Farrel Foundry and Machine Company of Ansonia, Conn., was held at Double Beach, Conn., on June 26. Leading officials of the company were in attendance. Lunch was served immediately on arrival at the shore resort after which a baseball game between the married men and single men was enjoyed. Other athletic events and amusements were followed by a fine shore dinner. Short addresses were made by various officials of the concern at the conclusion of the outing.

Stevens and Schidrowitz To Be Among Symposium Speakers

Prominent American Technologists Also Agree To Address Special Meeting of Rubber Chemists in September—Relation Synthetic to Natural Rubber Not to be Debated as Rumored

Plans have developed rapidly for the Raw Rubber Symposium to be held at Philadelphia, September 6 to 10, as the Fall meeting of the Rubber Division of the American Chemical Society. The success of the program seems already assured since some of the leading technologists have agreed to present papers on subjects of great interest. The symposium will cover both rubber production and manufacturing, and a comprehensive survey will be presented of all botanical, chemical and engineering developments which are taking place and are likely to take place.

Dr. Henry P. Stevens of London, consultant for the British Rubber Growers' Association, an investigator who has turned out an immense amount of important work and who is internationally known, is to be present and deliver an address on "Recent Developments in the Preparation of Plantation Rubber". His remarks are expected to be most enlightening in acquainting the American rubber chemist with plantation problems and what is to be expected in the near future.

Dr. Philip Schidrowitz, another equally eminent rubber technologist whose work has been of great importance, is personally to present a paper on "The Direct Use of Latex" which will not only be highly informative but will offer a critical discussion of prospects in the use of latex.

Ernest Hopkinson, Vice President of the United States Rubber Company will address the Symposium on "Botanical and Chemical Developments in the Rubber Plantation Industry", which will show work in progress by the United States Rubber Company on its plantations.

G. H. Carnahan, President of the Continental Rubber Company is to describe "The Botany and Agricultural Problems of Guayule Rubber" and Dr. David Spence, Vice-President of the same organization, known widely for his past fundamental work on rubber, will discuss "The Chemistry of Guayule".

Dr. H. N. Whitford of the Rubber Association of America will present a paper on "Wild and Plantation Rubbers of Africa and Tropical America". Most American rubber chemists are unfamiliar with this subject and will be particularly pleased to become acquainted with the present situation.

There will be other speakers of equal prominence who will present papers on other aspects, announcement of which will be made shortly. The completed program will enable the Rubber Division to hear some of the most interesting papers and addresses in its history.

Those in charge of the program feel that too great stress cannot be laid on the fact that the speakers are limited to purely scientific, technical and economic subjects and that there is to be absolutely no controversial subject discussed. Mention has very recently been made in the press that the symposium offers an opportunity for a debate between the plantation interests and those interested in synthetic rubber. This information is branded by those in charge as being misleading and false, and no speaker is expected to have either the opportunity or the desire to offer his personal opinions on any subject not strictly scientific or technical. For this reason those present may be certain of each speaker devoting his entire time to presenting that subject in which he is most versed.

The subject of synthetic rubber is to be discussed in one or two papers to acquaint the rubber chemist with its present status. Since the symposium is for the purpose of presenting new ideas and facts, the discussion of synthetic rubber will be treated merely as a separate topic unrelated to plantation rubber.

Not only will the addresses themselves give an opportunity for acquiring first-hand knowledge of present and future developments both from the plantation and from the manufacturing point of view, but each address will undoubtedly be followed by a general discussion which in itself will be of the highest value.

Footwear Distributors

The Goodyear India Rubber Glove Company of Naugatuck, Connecticut, has established a distributing branch in St. Paul, Minnesota, to be known as the Goodyear India Rubber Selling Company, which will serve the retail rubber footwear trade throughout the entire Northwest.

J. T. Warne, who handled the line for the former distributors, Foote, Schulze & Co., and for the past two years has been manager of the Cambridge Rubber Company at Chicago, is the manager of the new branch. George M. Reiffenach, formerly of the St. Paul branch of the United States Rubber Company is treasurer.

FOOTWEAR FACTORY FOR SALE

Fully equipped rubber footwear plant including tennis and sport shoes, and partially equipped hard rubber factory, sale or rent, option to purchase; 2 acres facing harbor and hard surface road; 50 miles from New York City; 500 h. p. engines and boilers, good condition, ready to run. Henry S. Mott, Northport, N. Y. Telephone Northport 22.

HILL CHOSEN ASSISTANT CHIEF OF RUBBER DIVISION

C. R. Hill, assistant trade commissioner of the U.S. Department of Commerce at Bogota, Colombia, has been recalled to the United States and appointed assistant chief of the Rubber Division in the Bureau of Foreign and Domestic Commerce. He succeeds E. G. Holt who was recently advanced to the position of chief.

Mr. Hill was a member of the Central American crude rubber survey party where he was an assistant to John C. Treadwell. Prior to his service with the Department, he was employed in Central America on the banana plantations of the United Fruit Company.

From July 6 to 10, the new appointee was in Akron visiting rubber factories and conferring with rubber company officials concerning the services which the Rubber Division renders.

Fluxite on Market

The Damascus Manufacturing Corporation of Cleveland have placed on the market a new rubber softener and aging compound known as "Fluxite" and said to be highly efficient. It comes in both solid and liquid forms and can be used in tires, mechanicals and other products, including hard rubber. A grade is prepared for every compound. The company also offers petrolatum, rosin oils, waxes and rubber fillers. H. M. Royal, Inc., are agents for New Jersey.

New Dunlop Line

A new popular-priced line of balloon tire equipment comprising six sizes of balloon casings with corresponding balloon tubes has been placed on the market by the Dunlop Tire and Rubber Company. The line is to be known as the "Buffalo" after the city in which the Dunlop factory is located. One size in the line, the 29 x 4.40, has been available for several months but the others are now being made for the first time.

GOODYEAR OCCUPIES NEW QUARTERS IN NEW YORK

The New York office of the Goodyear Tire and Rubber Company have been moved to a combined office and warehouse building which has been erected for the company at Fifty-eighth Street, in the Eleventh Avenue district.

The new Goodyear building has a frontage of 100 feet on Eleventh Avenue and is 167 feet deep. It will house both domestic and export operations of the company.

"Proximity to the Hudson River docks gives ideal facilities for expediting export shipments," said Irwin M. Quinn, Goodyear manager for the New York area, in announcing the move. "Ample space for trucks at the Fifty-eighth Street side of the building and in the rear will permit the handling of the large volume of domestic shipments with maximum efficiency."

The New York Central Railroad, which runs in front of the Goodyear building, has put a spur track directly into the first floor of the building itself, so that two carloads of tires or other products may be shunted into the building and loaded and unloaded simultaneously.

Lipper on Vacation

R. C. Lipper, Singapore manager for the Firestone Tire and Rubber Company, is in the United States on a vacation. His home is in Pennsylvania.

When Considering

RECLAIMED RUBBER FOR INNER TUBES

—don't overlook the fact that our No. 188 is made especially for this purpose. This stock is clean, ages well, mixes easily and cures with good resistance to wear.

¶ No. 188 stock is the result of long experimentation to produce the ideal reclaim for inner tubes. Data prepared by our technical staff will be gladly sent on request.

Ask about No. 188 for Inner Tubes.

The Philadelphia Rubber Works Company

AKRON OHIO

52 Vanderbilt Ave., New York City.

Land Title Building, Philadelphia.

GAS TUBING MAKERS TO BE REGISTERED IN NEW YORK

The Health Department of New York City has announced an amendment to the Sanitary Code which will require the registration of every gas tubing manufacturer whose product is sold within the city. The action has been taken on account of the large number of deaths from accidental asphyxiation during the last year. The amendment is to take effect on August 1.

"No flexible gas tubing will be registered or be permitted to be sold unless it conforms to specific requirements which have been set forth in regulations newly adopted", states an announcement by the Commissioner of Health. "All flexible gas tubing that is properly registered will be stamped so that the purchaser may recognize that it has passed all the necessary tests.

"These tests will be conducted in a special laboratory of the Department of Health and will determine the ability of the tubing to withstand certain amounts of heat, twisting, pulling and other forms of strain. The security of the slip ends will be particularly carefully tested. The test which will be applied will, as nearly as possible, be a duplicate of the abuses to which flexible gas tubing may be subjected in the course of its use".

Accessory Trade Slower

Business of manufacturers of automotive parts and accessories is showing a natural decline in the second third of the year after having made a record for production and sales during the first four months, the Motor and Accessory Manufacturers' Association has announced. The decrease in business is taken to be in anticipation of the usual midsummer slowing up of motor vehicle production.

The Association states that the index figure of members' business stood at 151 in May as compared with 161 in April. June business was expected to show a further curtailment.

Japanese Colonization

The Department of Labor at Washington has announced the reecipt of Brazilian dispatches to the effect that negotiations for concessions in both the Para and Amazonas rubber districts, involving the importation of Japanese labor, have been completed. It is understood by the Department that some of the credit of one million yen for aid to Japanese emigrants contained in the last Japanese budget will be used in promoting Japanese colonization in the districts named. Detailed reports as to the scale of rubber culture contemplated are lacking.

CATALPO!

RUBBER MAIN PURPOSE OF BACON'S MORO BILL

Congressman Admits in Record That Possibility of Rubber Culture Influenced His Introduction of Bill for Separating Southern Philippines From Other Islands.

The extent to which rubber influenced Congressman Robert L. Bacon in introducing his bill for the separation of the southern Philippines from the Manila government, which was the subject of comment in the last issue of THE RUBBER AGE, was revealed in a speech by Mr. Bacon which appeared in the Congressional Record on June 26. No doubt was left that one of the main purposes of the bill was to give American rubber planters a chance to develop in the islands enough rubber lands to take care of a good part of the American crude rubber needs. In fact, it appeared definite from Mr. Bacon's discussion of his proposition that rubber development bulked larger in his mind than the religious and political freedom of the Moros which was stressed at the time the bill was introduced.

Peasant Solution Unsatisfactory

After reviewing the physical factors favoring rubber culture in Mindanao and adjacent islands, the author of the bill expressed his opinion that development by peasant farmers, as has been proposed by the Philippine Department of Agriculture, would be a futile and unsatisfactory solution. Mr. Bacon felt sure that instead of blocking every effort to develop the islands on a large agricultural scale, as the Filipino politicians are charged with having done, the Moros, if enabled to do so, would make the necessary concessions for an American rubber development on a large scale.

"At intervals during the past twenty years American rubber interests have sought to undertake development in the Philppines," Mr. Bacon said, "but their every proposition was uniformly thwarted by existing laws and the attitude of the responsible authorities.

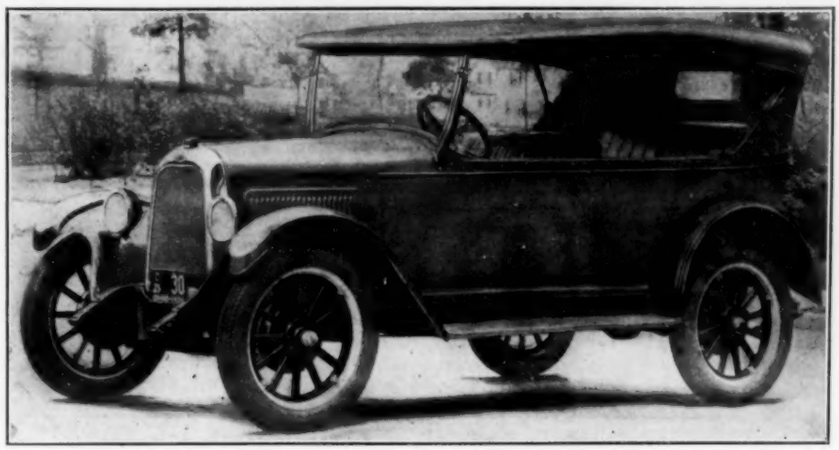
"The issue presented is an economic one and should be considered as such. Filipino politicians who oppose a development of the natural resources of the archipelago on the theory that it will delay independence are both selfish and short-sighted.

"The mere suggestion that legislation be enacted would enable American capital to engage in rubber production in the Philippines has served to start a hue and cry in certain quarters that 'the money interests proposed to exploit the Filipinos'. Coupled with this has appeared the suggestion that 'Filipino farmers' undertake this development and thus supply America's rubber needs without the intervention of large companies. A candid facing of the facts will show the absurdity of both contentions."

The Bacon bill was attacked in the House of Representatives by Pedro Quevara, the Philippine Commissioner in Congress. He scouted the idea that the Moros need a changed political status to secure either religious freedom or peaceful conditions in their territory. The Filipino people have confidence, he declared in the intention of the American people to respect and continue the political amity of the Philippines.

According to an Association Press dispatch, a huge mass meeting was held in Manila to protest against the bill and arrangements were made for similar meetings in nearly every province in the islands. The Moros were said to be jubilant over the introduction and discussion of the bill.

The 27 x 4.40 Comes To America On The "Whippet"



A European balloon tire, size 27 x 4.40, has been introduced to American motorists as standard equipment on the new "Whippet", a European-type light car recently placed on the United States market by the Willys-Overland Company. This tire, with an inside diameter of 19 inches, is the smallest tire ever used as stock equipment in this country. It was selected by Overland engineers in order to lower the body of the car in keeping with European practice. The claim is also made that the smaller tires provide a better transmission of power and will give longer service than larger casings.

The 27 x 4.40 tires for the Overland are being made by the Fisk Rubber Company who, in addition to providing the new size for the car manufacturers also faced the necessity of having early replacements ready throughout the country. When the car was first placed on sale, the Fisk sales department announced that stocks of the new tire had been placed in their 147 branches and were already obtainable from hundreds of Fisk dealers.

Increases Parking Space

The Firestone Tire & Rubber Company has recently opened a new four-acre parking space on its grounds at Akron which increases the parking capacity for employees of the plant from 300 to 1500. With its opening all street parking in the vicinity of the plant was eliminated.

FLUID **FLUXRITE** SOLID

A Rubber Softener and Aging Compound of Marvelous Efficiency. For Soft, Tire, Mechanical, Hard Rubber. A Grade for Each and Every Compound, also

PETROLATUMS ROSIN OILS WAXES RUBBER FILLERS

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TIRE DEALER ASSOCIATION NOW TAKING STOCK SURVEY

A survey of the tire dealer's stocks as of July 1 is being taken by the National Tire Dealers' Association by means of questionnaires sent to members from the office of the Secretary at 242 West 56th Street, New York City. George J. Burger, secretary-treasurer of the organization is of the opinion that never in the history of the tire industry have such statistics been so urgently desired as at the present time.

In addition to the usual questions about the number of various types of tires on hand and the number of lines carried, inquiries are included covering the extent to which price uncertainty has retarded sales, the rate of sales in the past six months as compared to the corresponding period of 1925, and the condition of the tire repairing business.

Return of the questionnaire is requested not later than July 20 and a summary of the fact developed is expected to be ready early in August.

Kase Rubber Company

The Kase Rubber Co., Inc., New York City, has been chartered at Albany with a capital of 500 shares of preferred stock with $100 par value and 100 shares of common stock with no par value. The stated purpose of the new company is the manufacture of rubber goods, including toys.

THE NAUGATUCK CHEMICAL COMPANY
NEW YORK
Materials for the Rubber Goods Manufacturer

TRIMENE BASE

A Universal Accelerator

Belongs to the Aldehyde-Amine class of accelerators.
Non toxic.
A little more critical than the guanidines.
Possesses antioxidant characteristics.
Has been widely adopted.
Has remained adopted 100 per cent.
Is growing in use.

Recommended especially for use in:—

FOOTWEAR:—All colors—vulcanized at 260-270° F. In some cases the use of both Trimene Base and a guanidine is desirable—specifically in varnished goods.

SUNDRIES:—Quick cures—any color—clean molds. Some users advise that the reduction in mold cleaning costs, with the adoption of Trimene Base, pays for the accelerator.

TIRE TREADS:—Gives a tough, resilient tread instead of a hard, woody type. Means better wear and less tread separation.

THE NAUGATUCK CHEMICAL CO.
1790 Broadway New York City

JUNE ARRIVALS AND CONSUMPTION LOWER

Unofficial Figures Indicate That Small Addition Was Made to American Stocks during Month—Heavy July Arrivals Predicted—May Official Figures.

Arrivals of crude rubber in New York during June, according to unofficial sources, amounted to 28,000 long tons. In past months about 93% of all the crude rubber entering the country has come in by way of New York and if that percentage continues to hold true, the complete June arrivals for the United States should be in the neighborhood of 30,000 long tons.

June imports of 30,000 long tons would be about on an equality with May but would be considerably below previous months of 1926. In both January and March there were more than 42,000 tons imported. In April the imports amounted to almost 35,000 and in February to almost 33,000 tons.

No consumption figures for June are yet available but it is estimated that about 26,000 tons were used during the month, allowing a further addition to United States stocks and contributing to the dullness of the market.

Estimates of arrivals in July are from 37,000 to 40,000 long tons. Many manufacturers expect the July consumption to surpass that of June in spite of the slackening in some companies to take inventory but it could scarcely be expected to go beyond May consumption which was a little better than 29,000 tons. In that event, important additions would thus be made to stocks again. Imports of crude rubber into the United States during May, according to the official figures of the Department of Commerce, amounted to 29,756 long tons, valued at $36,896,080 or an average of about 55½ cents per pound.

During May, 1,052 tons of crude rubber were re-exported from the United States, principally to Canada. The value of the re-exports was $1,558,987, or an average of 66 cents per pound. Accordingly, the re-export trade is theoretically on a profitable basis again, the import prices in February and March have been considerably higher than the invoiced value of the re-exports in those months. Most of the re-exported rubber moves to Canadian branch factories of American rubber companies.

British Malay furnished about 60% of the United States imports of rubber in May. A little over 1,000 tons arrived from Great Britain. The average value per pound of the Malayan rubber was 54 cents while that from Great Britain was declared to be worth 77 cents per pound. The difference apparently lies in the forward contracts which were made several months ago.

CATALPO!

FINDS ACTIVE DEMAND FOR RUBBERIZED PAPER

Process of Coating Special Papers Yields Product of Value in Shoe Trade—Expansion in Demand from Bookbinders and Paper Merchants Foreseen.

The Premoid Manufacturing Company, of Boston, which has its plant at Springfield, Mass., is reported by *The Paper Mill* to have made a success of using rubber in connection with paper manufacture, but under a totally different process from the one commonly known. Instead of introducing rubber latex into the paper while it is being manufactured, that is, in the beater, under the patent of Kirke L. Moses, vice-president and general manager of the Premoid Company, the rubber is applied on the finished paper base just as the manufacture of asphalt roofing shingles is carried on by treating the finished felt.

It is claimed by Mr. Moses that his method permits the introduction of a greater percentage of rubber. In describing his paper base, Mr. Moses in his patent states:

"In making this improved product I employ, as a base, material having somewhat the nature of paper in that it is the product of a paper making machine, but which is formed of loosely matted relatively long fibers producing a highly porous web which of itself has not very great strength. The character of the fibers from which this base product is formed may vary within wide limits without departing from my invention. I find good results can be secured by using hemp fiber, jute fiber, ramie fiber or any other similar fibrous material wherein the individual fibers are relatively long."

"Premoid", as made from this loosely matted paper, is then subjected to rubberizing either by coating the faces or by being immersed in a rubber solution.

The biggest users of this product to date have been the shoe factories. It is said that hundreds of thousands of feet have been sold to them and its use as a substitute for cloth or artificial leathers, etc., in reinforcing the backs of shoes, and throughout the linings of women's light weight shoes has grown tremendously.

According to the paper trade journal, paper merchants are now taking on this product, although it is entering new fields in their hands, but fields which give promise of an excellent future. The Premoid Manufacturing Company has received favorable responses from a selected list of paper merchants, one merchant in each district being addressed, and expects to develop a market for use of their rubberized paper in the bookbinding, catalogue, document envelope and similar fields where an improvement over paper or cloth is sought.

The product has important qualities which would recommend it to many of the special uses to which paper is put, but in which an extremely strong tear and wear resisting and well colored material is desired. It embosses well and will stand up under folding and raveling.

It cuts to a nonfraying edge, a superiority over artificial leathers and cloths. It is available in numerous colors.

Superficially the sheet has the appearance of fine cover papers and can be subjected to impressions in furtherance of this end. Although undoubtedly somewhat expensive as a cover for regular publication work for certain cover purposes where expense can be subordinated to the desire for wear and moisture resistance, the stock appears to stand in an excellent light.

Personals of the Trade

Tracy Covering Jobbers

R. B. Tracy, eastern sales manager of the Henderson Tire and Rubber Company of Columbus, Ohio, has returned to his former position as factory representative calling on the tire jobbers in the larger cities where he has a wide acquaintance.

Firestone Appoints Mead

Melvin R. Mead, formerly in charge of the Saginaw, Michigan, warehouse of the Firestone Tire and Rubber Company, has been appointed manager of the Detroit branch. Mr. Mead is well known in the Michigan tire trade having been actively engaged in the wholesaling and retailing of tires in that state for 15 years.

Carlisle Now President

C. H. Carlisle, who has been vice-president and general manager of the Goodyear Tire and Rubber Company, Ltd. of Canada for several years, has been elected president of that company. He succeeds E. G. Wilmer who is now president of Dodge Brothers. The Canadian Goodyear factory is at Bowmanville, Ontario.

New Mohawk Branch Manager

J. J. Pie, formerly bus and truck tire representative for the Mohawk Rubber Company in Chicago territory, has been appointed manager of the Chicago branch of that company. Mr. Pie joined the Mohawk organization in 1924. He has also been a tire distributor in St. Louis.

SULPHUR
FOR THE RUBBER TRADE

"TIRE" BRAND SUPERFINE
Rubber Sulphur
"TUBE" BRAND VELVET
Rubber Sulphur

Specify "Tire" and "Tube" Brands on your orders. This will assure you of Stauffer quality and service.

Stauffer Chemical Co.,
Houston Texas
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"The change which the vegetable oil undergoes during vulcanization so alters the chemical and physical characteristics as to hinder its identification. From the point of view of the user of Factice the question of quality resolves itself into confidence and analysis."

Extract from "Measurements of Quality of Factice".

RUBBER FACTICE
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HIGHEST QUALITY
THE STAMFORD FACTICE
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THE STAMFORD RUBBER SUPPLY CO

INTERNATIONAL PULP CO., *41 Park Row, New York, N. Y.*
SOLE PRODUCERS OF PURE **ASBESTINE** SPECIALLY PREPARED FOR USE IN RUBBER
Covered and Protected by Letters Patent Registered at U. S. Patent Office, Washington, D. C.
LIBERAL WORKING SAMPLE FURNISHED FREE

McCLAREN TESTS VERIFY ECONOMY OF PAVED ROADS

The average loss of weight from wear of a tire for each 500 miles traveled varies from one ounce on brick or concrete roads to two to seven times that amount on gravel roads, and from ten to fifty times as much on macadam roads, according to an announcement of the results of tests conducted by the McClaren Rubber Company of Charlotte, N.C.

The experiments revealed that owing to the bounding of the rear wheels when traveling over rough surfaces the wear on the back tires is from 50 to 75 per cent greater than on the front tires. It was also shown that when a car is started from rest the rear wheels exert a downward kick on the pavement ranging from 100 to 1,000 pounds, and the resulting friction must be resisted by the back tires.

From a study of the relative consumption of gasoline and oil on the different kinds of roads it was found that the increased consumption of gasoline required in traveling over ordinary dirt roads instead of paved roads cost the motorist as much as if he had to pay an additional tax of 24 cents on a gallon of gas, and that even travel on good gravel roads imposed an additional expenditure equivalent to a tax of 9 cents a gallon. This was due to the spinning of wheels and loss of traction on the uneven road surface. The McClaren Company expects to use the facts developed in the tests in designing tires.

RANGER

3 times the strength of ordinary

TUBE RECLAIM

200% Greater Stretch

Its smooth tubing and quick working qualities put it in a class by itself

U.S. RUBBER RECLAIMING CO. Inc.
100 East 42 St. N.Y. BISON Factory-Buffalo, N.Y.
43 Years Serving the Industry—Solely as Rubber Reclaimers

Akron Representative: F. F. Dugan, 617 Second Nat'l. Bank Bldg.

PREDICTS GOOD SALES FOR NEXT SIX MONTHS

O'Neil Believes Speeding Up in Tire Demand Will Fully Make up for Slow Sales in First Half Year—General Busy but Output is Insufficient.

There is no reason for anything but good cheer in the motor and tire industries during the second half of 1926, in the opinion of William O'Neil, president of the General Tire and Rubber Company of Akron.

"The saturation point in automobiles has faded away into the future again", Mr. O'Neil wrote in a recent public statement, "and the past six months have seen a larger car production than any similar period in history.

"In tires, the industry got away to a bad start, because of the unusually severe and lingering winter, which delayed driving all through the north.

"Since the weather relented, passenger cars, trucks and buses have been making up for the time lost, and plenty of tires are being bought and used now. It is certain that the next few months will use up more tires than ever.

"So the worst is out in the tire industry, and prospects are all for a phenomenal second half year. Our own factory is turning out more tires daily than any day last year except one, and the demand is exceeding the output.

"Prognosticators recently have placed too much emphasis on whatever gloom they could gather from the results of a late spring. When one steps back and views American industry in real perspective there is every reason for encouragement and optimism for the rest of the year."

ACCESSORY COMPANY WILL LEASE WHILE REBUILDING

The Virginia-Carolina Rubber Company, tire accessory manufacturers of Richmond, Virginia, whose plant was recently destroyed by fire, has taken a short term lease on a building formerly occupied by a tractor sales company in order that production may be resumed at the earliest possible date. New machinery has been ordered to replace that lost in the fire and it is expected that production will again be underway at an early date. About sixty men will be employed.

Steps are being taken to secure a new factory site and more adequate buildings will be erected to take care of the company's expanding business. Officals state that the company is capitalized at $230,000 and has been successful from the start.

CATALPO!

RUBBER TRADING RISK REMOVED SAY BROKERS

Henderson Brothers and Cotton Firm Issue Booklet Explaining How Trading in Futures on Rubber and Cotton Exchanges May Protect Manufacturers on Contracts.

That the rubber manufacturer may use The Rubber Exchange of New York effectually to take the risk out of his buying forward the rubber to cover his needs is the opinion expressed in an attractive booklet issued jointly by Harriss, Irby & Vose and Henderson Brothers & Co., Inc., prominent New York cotton and rubber brokerage firms. The booklet also refers to trading in cotton. Its stated purpose is to explain the mechanics of trading in both rubber and cotton and the use of the facilities provided by the exchanges covering those commodities.

A careful explanation is made of the "hedge" as a measure of protection for the manufacturer who is compelled to buy raw materials several weeks or months in advance. "Indisputably", the booklet declares, "American cotton and wheat are marketed on the narrowest distributing margin of any major commodity grown anywhere in the world, a condition entirely and directly due to the universal use of hedging. What hedging does for these commodities, it can do for rubber and for the rubber manufacturer as well as the cotton manufacturer and flour miller".

The selling of hedges to protect a profit or limit a loss in actual rubber is treated in an interesting chapter in the booklet. If a decline sets in, it is pointed out, after a manufacturer has contracted for actual rubber, the ensuing loss can be limited at any time by the sale of an equivalent amount of futures. Which ever way the market goes thereafter, the manufacturer would be protected since a further loss on one of his commitments would mean a greater profit on the other. Similarly, if the manufacturer found himself with an unexpected profit on his rubber between the time of its purchase and the sale of the tires made from it, he can make the profit secure by selling futures against it. The sale of the hedge automatically fixes the price at that level and it is of no consequence whether the market goes up or down.

The hedging of tire fabrics is discussed although it is recognized that such a practice is much better known to many tire manufacturers than is the hedging of rubber.

Two general effects of the trading in futures on the New York Rubber Exchange mentioned by the authors of the treatise relate to the certainty of contracts being kept and the limits imposed on price fluctuations. The first of these is guaranteed by the operations of the Exchange clearing house and the other by the plurality of potential buyers or sellers brought into the market by the Exchange as the price tends to decline or increase.

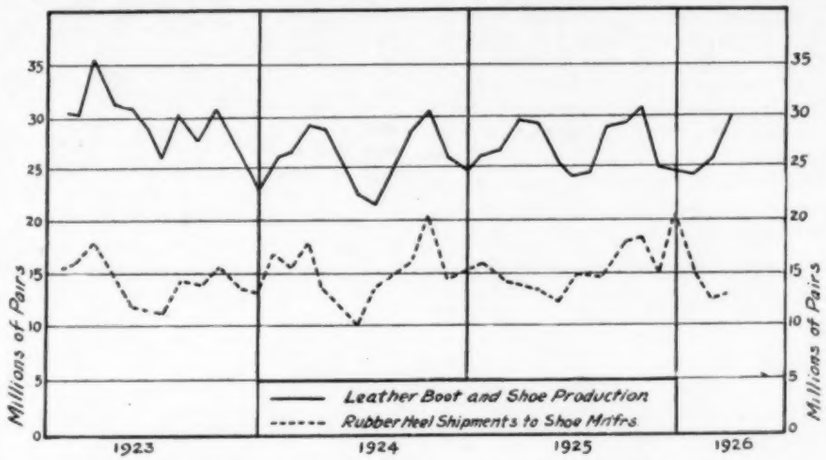
Rubber Heel Sales to Shoe Manufacturers

A marked decline in the shipments of rubber heels during the first four months of 1926, particularly to shoe manufacturers, is shown by statistics recently compiled by the Rubber Association of America from figures supplied by heel manufacturers. The monthly heel reports of the Association are estimated to be 70% complete but have been raised to 100% for the porposes of the present comparison.

On such a basis, it is estimated that heel shipments during 1925 amounted to 282,706,324 pairs of which 184,533,219 pairs, or 63.4% were sold to shoe manufacturers. Three per cent were exported and the remainder went to the repair trade.

During the first four months of the current year, total shipments have amounted to barely 74,000,000 pairs as compared with slightly more than 80,000,000 pairs in the same period of 1925. The decrease for the period was 7.6% but for April of this year as compared with April, 1925, it was 30.4%.

A graphic comparison of the number of pairs of rubber heels shipped to shoe manufacturers with the number of pairs of boots and shoes produced is shown in the accompanying chart. The footwear



figures used are from the Department of Commerce. During 1923, 48.2% as many pairs of heels were shipped as there were pairs of boots and shoes produced; in 1924, this percentage had increased to 56.9% and in 1925 to 57%. It has shown a tendency to decline during the first quarter of the present year.

The footwear production figures necessarily cover some types for which the use of rubber heels is not logical and hence the percentage just stated, and reflected in the graph, are believed to be somewhat lower than they would be if a complete segregation of different types of leather footwear were possible.

CLYDE E. LOWE CO.

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CIRCULAR INNER TUBE MANDRELS

AND

ECONOMY CALENDER SHELLS

Prompt Service *Let Us Quote You*

SEIBERLING AND MOHAWK REPORT INCREASED SALES

In spite of a general slowness in automobile tire sales during the early months of 1926, the business of the Seiberling Rubber Company of Barberton, Ohio, is reported to have increased in the first five months a full 40% over the corresponding period of 1925. This puts the company well on the way toward its $18,000,000 sales goal for the current year. Sales last year amounted to $10,569,000. Seiberling is now reputed to stand eighth in production among American tire manufacturers.

The Mohawk Rubber Company of Akron has announced that sales for the first five months of 1926 showed a gain of 44% over the corresponding period of 1925. The Mohawk factory is said to be working at capacity. J. F. Jones, sales manager, has reported that the percentage increase of profits in the current year is even more favorable than the sales increase.

Republic Personnel Changes

In accordance with recent changes in the operating forces of the Republic Rubber Company of Youngstown, Edward W. Miller, assistant works manager will take over some of the duties of Works Manager J. P. Kearns. O. S. Dolison who has been acting manager of the mechanical goods department was made manager of that department. J. P. Bird was named as his assistant and H. T. Morneweck as chief clerk.

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SUPREX CLAY

Maximum Re-enforcing Value at Minimum Volume Cost.

Prompt and uniform shipments of this superfine clay pigment are now available.

Carefully refined exclusively for rubber compounding, SUPREX CLAY may be relied upon for the maximum re-enforcing effect obtainable from this class of pigment.

SUPREX CLAY carries the full guarantee of compounding uniformity which has made

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ARROW BLACK

The Highest Standard Gas Black of the Rubber Industry

J. M. HUBER, Inc.

Manufacturers of High Quality Pigments for Rubber Manufacture

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WILL INAUGURATE NEW STATISTICAL SERVICES

American Consuls and Trade Commissioners To Join in Plan for Making Important Crude Rubber Statistics Available Earlier Than is Now Done.

Two new statistical services of interest to everyone interested in crude rubber are to be started soon as a cooperative effort between the Departments of State and Commerce in Washington. The first will relate to shipments from producing countries and the second to current movements of rubber to American ports.

The first service is being established in answer to a demand for more prompt transmission of figures which are already being received by the Department of Commerce but several weeks late and not until they are available through other channels. Under its provisions appropriate consuls and trade commissioners stationed in rubber producing countries will make special arrangements to receive and cable to Washington each month the statistics covering the total crude rubber exports from countries or districts. These figures are now being received in the United States for some countries but an effort will be made to supply more complete and prompt statistics than anything heretofore available. It is estimated that the foreign officers of the government who will join in the work will cover about 98% of the plantation rubber production.

The second service will concern only the rubber moving to United States ports and will be instituted on a weekly basis. It is thought that the quantity of rubber afloat at any time will be much better revealed by such a system than by anything heretofore devised. Reports will be received from Eastern ports and London from which about 97% of the American imports of plantation rubber customarily move. This will also be a cabled service. It is expected that after it has been in operation for a number of weeks, the crude rubber trade will be able to judge rubber arrivals much more accurately than in the past.

Instructions for the new services are now being issued by Assistant Secretary of State Carr and the Director of the Bureau of Foreign and Domestic Commerce. When they are in operation, the resulting statistics will be issued in mimeographed form through the Rubber Division of the latter organization.

Fire at Seiberling

The Seiberling Tire and Rubber Company, Barberton, Ohio, recently sustained a fire loss of $1000 when a storage shed burned.

CATALPO!

Hewitt Stock Issue

New financing to the extent of $1,000,000 to cover the purchase of new equipment and furnish adequate working capital has been announced by the Hewitt Rubber Company of Buffalo, N. Y. The financing will take the form of 20,000 shares of seven per cent cumulative prior preference stock at $50 par value with a common stock bonus. The issue will be handled through the Hewitt organization without underwriting. John H. Kelly, president of the company, has estimated that the annual net sales of the company will reach $6,000,000 including recently acquired subsidiaries.

New Springville Factory

The Henter Corporation of Akron has purchased the Standard Radiator building in Springville, N. Y., where it is understood hard rubber goods will be manufactured. About thirty hands will be employed.

Artificial Rubber Factory

The Everlive Rubber Corporation, recently formed under the laws of the State of New York with a capitalization of $600,000, has leased a large building in Newark, New Jersey for a long term of years. It is reported that the company will undertake the manufacture of an artificial rubber which was discovered in the laboratories of the Syracord Rubber Company at Syracuse, New York. No details as to the base or process for the synthetic product have been divulged. N. H. Truett of New York City is president of the company and E. L. Livingston is vice-president. The latter is understood to be the inventor of the artificial rubber.

Maple City Prosperous

Officials of the Maple City Rubber Company of Norwalk, Ohio, manufacturers of rubber toy balloons, report an unusually prosperous season. Over 40 persons are now employed by the firm. A branch store has recently been opened in St. Louis to care for the increasing trade in that section. The company is also doing a considerable export business.

Essex to Build

The Essex Rubber Company of Trenton, New Jersey plans to begin shortly the erection of a two story 50 x 250 ft. addition to its present factory, at a proposed cost of $75,000. The company manufactures inner tubes and hard rubber goods.

Fabric Mill Started

The Hightower Textile Syndicate has let the contract for the construction of the first $3,000,000 unit of the mills to be built at Thomaston, Georgia, as a result of a recent deal whereby they will manufacture cord tire fabric for the Goodrich and Fisk rubber companies for the next ten years. The new mill, to be known as the Martha Mill, will be three stories high, and will have approximately 30,000 spindles. The factory is expected to be operating by the first of the year.

Succeeds Aero Cushion

A new rubber manufacturing company to be known as the Wingham Rubber Company has been organized at Wingham, Ontario, Canada. The concern succeeds the Aero Cushion Inner Tire and Rubber Company and has acquired the plant, machinery, patents, formulae and stocks of that firm.

New California Factory

The Rubber Products Company of America has broken ground for the construction of a new $250,000 plant at Bates City, California. The company is engaged in the reclaiming of rubber and its conversion into rubber floor covering.

"DURO" BRAND

GUAYULE RUBBER

Washed and dry, ready for compounding. Invaluable in conjunction with Plantation Rubbers and Reclaims as an aid in Compounding. Especially useful in all Friction Stocks.

CONTINENTAL RUBBER CO., OF NEW YORK
120 BROADWAY NEW YORK CITY

PARA-FLUX *A Universal Softener*
(Reg. U. S. Patent Office)

for TIRES, MECHANICALS, RECLAIMS *and* FRICTION TAPE

The C. P. HALL COMPANY
118 Central Savings & Trust Bldg. AKRON, OHIO

Firestone-Apsley Strike

Following a strike of 200 gaiter makers of the Firestone-Apsley Rubber Company of Hudson, Massachusetts, on June 25 because of a disagreement over wages, about 1,000 additional employees went out in sympathy on June 30th. The plant employs about 1600 workers.

May Retire Bonds

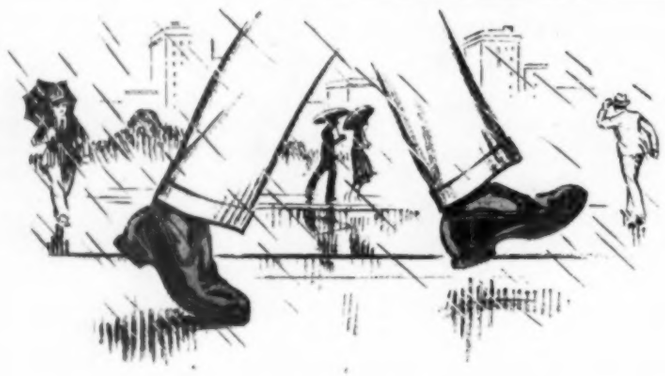
Persistent rumors in Wall Street that the Goodyear Tire and Rubbber Company is planning to retire its 8 per cent mortgage bonds and debentures in order to replace them with a single bond issue carrying a 6 or 6½ per cent bond coupon still lacked confirmation by Dillon, Read & Company, the Goodyear bankers, on July 1.

Of the 8 per cent mortgage bonds there are outstanding $22,500,000, redeemable at 120 on any interest date, May 1 or Nov. 1. Of the 8 per cent debentures there are outstanding $18,225,000, redeemable at 110 on any interest date on thirty days' notice.

Will Build Dryer

The Chemical and Vacuum Machinery Company of Buffalo has acquired exclusive right to build and market the apparatus known as the Judelson Evapo-Dryer, according to an announcement made by E. G. Rippel, president of the company.

IT PAYS TO MICRONIZE



Under the Varnish

IN the rush and scuffle of hurrying feet the tender film of varnish is soon destroyed—often exposing the greyish hue of the underlying vamp.

Not So—however—if to the compound there has been imparted the dense, jet, permanent black beauty of

MICRONEX

Reg. U.S. Pat. Off.

The King of Rubber Pigments

Full details from

Binney & Smith Co.
41 E. 42nd Street-New York City

GOODYEAR TO CONTROL 60% OF ITS FABRIC SUPPLIES

The Goodyear Tire and Rubber Company will produce over 60 per cent of the fabric used in its tires when the new mill recently acquired at Cedartown, Georgia, is in full operation. The company already has mills at Goodyear, Conn., New Bedford, Mass., Los Angeles, Cal., and in Canada and with this recent addition, according to C. C. Slusser, vice president of the company, will have approximately 162,000 spindles which will turn out about 20,000,000 pounds of the 32,500,000 pounds of fabric which the company uses annually.

A two story addition to the present structure will be started soon and by fall this plant is expected to treble its present output. Plans are also underway to construct sufficient cottages to house over 700 new employees.

Cedartown, Georgia, the site of the new mill which will be known as the Goodyear Clearwater Mill, is 75 miles from Atlanta, and is located on a junction of the Seaboard Air Line and Georgia Central railways. The town now has a population of around 7,000.

B. M. Parmentier, for many years with the Goodyear New England mills, will be superintendent of the new mill, and Harry Lorton of Akron will be assistant treasurer.

Germans Retain Control

According to an Associated Press dispatch from Berlin, stockholders in the Cameroons Rubber Company have taken steps to retain control of the company in German hands through preventing foreigners from acquiring a majority of the stock. The measures are reported to have been taken after a rumor that Henry Ford had acquired 700 shares in the company reached the Hamburg Bourse.

The stockholders have decided to issue an additional 100,000 marks of preferred stock, each share of which will have twenty-fold voting power. The preferred stock will be issued only to German citizens and will not be dividend bearing. The company was originally formed to grow rubber in the African Cameroons.

Mason Copper Company

Dudley M. Mason, former general manager of the Mason Tire and Rubber Company of Kent, Ohio, is moving to Los Angeles. He will head The Mason Copper Company which has secured control of important copper mining territories in Arizona.

CATALPO!

Cotton and Latex Sole

The United Shoe Machinery Corp., of Boston is now actively carrying out a national advertising campaign on the Wescott sole for which that company is the exclusive selling agent. The sole was first used by the public in the spring of 1925 and is said to have aroused great enthusiasm, particularly among those who have used it on sport shoes.

According to the selling agents, Wescott soling material is a blending of selected cotton felt and unvulcanized latex rubber. After the felt is completely impregnated with the latex, it is molded to the desired thickness. A corrugated surface somewhat resembling that of natural crepe rubber soling is given it at the same time. The resulting product is said to have all the flexibility of unvulcanized rubber together with the strength and lightness of cotton felt.

WESTCOTT SOLE

Miller on Full-Time Basis

The Miller Rubber Company's plant at Akron, Ohio, is being operated three shifts per day and six days per week in an effort to take care of current business, William F. Pfeiffer, General manager of the company, announced on July 2. Mr. Pfeiffer is optimistic over the possibilities for an excellent demand for rubber goods of all sorts during the latter half of 1926. In his opinion, the present surplus of tires might easily be turned into a shortage with the coming of real summer weather.

CHROMILITE COMPANY WILL PLATE MANDRELS

Well Known Companies Form New Corporation Which Will Have Akron Plant in Operation by August 1—Will Undertake Other Plating Work Also.

The New Haven Sheradizing Co. of Hartford, Conn., and the Metals Protection Corporation of Indianapolis, Ind., have jointly formed the Chromilite Process Corporation which is to start in the business of Chromilite plating equipment for the rubber industry and others. The principal work for the rubber industry will be done on mandrels. The tests made in the past are said to have given most encouraging results.

In describing the uses and tests made with Chromilite, Mr. Schoen of the New Haven Sheradizing Company, told a representative of THE RUBBER AGE that this new process can be applied successfully to tire molds, rings, mechanical molds and other similar equipment. Tire molds plated with Chromilite have withstood the action of over 3000 heats without any wear or necessity of cleaning against an average of 104 heats with ordinary molds. Experiments made with mandrels over a period of 8 months proved the efficacy of the new process in that the mandrels showed no discoloration and held their original brilliancy.

It is the intention of the new company, which was organized under the laws of Connecticut, to have plants distributed throughout the United States. The first plant is to be installed and operated at 1033 South High Street, Akron, Ohio. It is expected to be ready for operation by August 1. James Verhayden will be superintendent.

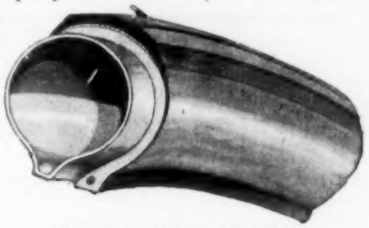
A. F. Schoen is president of the Chromilite Process Corporation, James C. Patten is vice-president and W. I. Charter is secretary and treasurer. Messrs. Schoen and Charter are now associated with the New Haven Sheradizing Company while Mr. Patten is president of the Metals Protection Corporation of Indianapolis.

To Auction Tire Plant

The plant of the Union Tire and Rubber Company of Mount Vernon, Ohio, will be offered for sale at a public auction on July 12, under a court order to the receiver. The plant will be sold for cash only and the first payment must be $10,000. If the plant is not sold, it will be readvertised and reoffered for sale. The real estate, improvements, furniture and equipment of the company were recently appraised at $88,900.

Reduces Tube Prices

A reduced price list effective July 1 has been issued by the Polson Rubber Company of Cleveland, to cover its Polson-McWade puncture-sealing tube. This special tube is constructed with a thick crescent of rubber on the inner tread side, as shown in the illustration. When inflated, the curve of the casing is said to force the extra rubber under compression to hold any object piercing the tire and tube or to close the puncture after the object has been withdrawn.



POLSON-Mc WADE TUBE

Charles A. Emerson

Charles A. Emerson, purchasing agent for the United States Rubber Company for nearly 25 years, died at his home in Providence, R. I. on June 12. He was 77 years of age.

In 1887 Mr. Emerson became connected with the National India Rubber Company at Bristol, Connecticut, and the following year was made an officer of the New National India Rubber Company. With the formation of the United States Rubber Company in 1892, Mr. Emerson was appointed to organize and direct its purchasing department. He remained head of that department until October 1, 1916 when he retired from active service.

PEQUANOC RUBBER COMPANY
Office and Works: BUTLER, N. J.
MANUFACTURERS OF
RELAIMED RUBBER
WITH A REPUTATION FOR
UNIFORMITY -- RELIABILITY -- CLEANLINESS

DIVIDENDS TO BE RESUMED ON FISK SECOND PREFERRED

Directors of the Fisk Rubber Company announced on June 30 the regular quarterly dividend of $1.75 a share on the first preferred and first preferred convertible stocks, payable August 2 to stockholders of record July 15, and the resumption of dividends on the $995,900 outstanding shares of second preferred stock at the quarterly rate of $1.75 per share, payable September 1 to stockholders of record August 15.

No dividends have been paid on the second preferred stock since June 1, 1921. The directors announced that all sinking fund requirements on the first preferred stock have been provided for to date, and all overdue capital obligations liquidated with the exception of the arrearage on the second preferred stock, which is expected to be reduced 35 per cent by the end of the fiscal year, October 31.

Joins Mold Company

The Akron Standard Mold Company of Akron has announced the addition of W. W. Sigler to its staff of sales engineers. For several years Mr. Sigler has been engaged in machine and personnel efficiency work with the Goodyear Tire and Rubber Company. He is a graduate of Ohio State University in industrial engineering.

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WEEKLY MARKET REVIEW ON REQUEST

EXCHANGE AMENDS ITS TRADING REGULATIONS

Proposed Changes by Adjustment Committee in Price Differentials for Various Grades Delivered Makes Necessary Trading in "Old" and "New" Contracts.

Trading on the Rubber Exchange of New York, which underwent some disruption following the promulgation of an amendment differentiating between new and old contracts, has resumed its normal course. The confusion of the traders in regard to the contracts they had for sale has been eliminated, partly through the operations of the clearing house of the association.

Since June 21 business has been carried on according to the new amendment. During the first week about forty per cent of the contracts changing hands were "old" as compared to sixty per cent "new". The amendment changes the price differentials between the various grades of rubber deliverable on Exchange contracts. In explaining the new basis, F. R. Henderson, president of the Exchange, said:

"Under the original by-laws, the price differentials of good F.A.Q. ribbed smoked sheets and ordinary F.A.Q. ribbed smoked sheets were fixed by 2 cents and 4 cents respectively below the price of standard quality ribbed smoked sheets. On off-quality first latex crepe the differential was fixed at 2 cents below the price of standard quality first latex crepe.

"Under the new amended provision of Section 36 of the by-laws, these price differentials will be fixed by the Adjustment Committee on the fifteenth day of each month and prevail on deliveries under new contracts during the following calendar months.

"Inasmuch as amendments to the by-laws affecting the amount of money to be paid or the grade or quality of rubber to be delivered cannot be retroactive with respect to existing contracts, this new amendment will not affect the open contracts for deliveries during the next twelve months entered into prior to June 21, 1926."

Lambert Appeal Rejected

The Court of Appeals of the District of Columbia recently affirmed the action of the United States Commissioner of Patents in rejecting the application of the Lambert Tire and Rubber Company for a patent on an automobile tire design. The court held that the application of the Lambert Company covered merely a rearrangement of a design previously registered.

Group Insurance Popular

Out of 9,958 employees of the United States Rubber Company eligible for insurance under the group insurance plan which that company has arranged with the Equitable Life Assurance Society, 8,920 or 90 per cent have taken advantage of the offer.

BUREAU TESTS AGING EFFECTS OF COLORS

Black Rubber Compounds Are Found by Bureau of Standards to Last Much Longer than White or Red When Exposed to Sunlight.

Tests made by the Bureau of Standards on the aging properties of soft rubber compounds when exposed to sunlight have brought the conclusion that the use of dark colored compounds is advantageous under such conditions.

The interest of the Bureau was aroused by the action of a certain light colored compound which retained its life very well when kept in the dark but deteriorated rapidly in sunlight. In order to obtain data on the effect of color, two compounds were made. To one two per cent of carbon black was added and to the other two per cent of red oxide. The three compounds, the original light colored one with the red and black ones, were then simultaneously exposed to sunlight for six months and tests made at intervals of two months to determine the deterioration of each.

The results showed that during the six months the rate of deterioration of the light-colored compound was about five times as great as that of the black and about twice as great as that of the red. While the quantities of coloring materials added to the compounds were not sufficient to affect the tensile properties appreciably, exposure to light showed that the aging characteristics were greatly changed.

The Bureau considers that these tests prove the desirability of using dark-colored compounds in rubber articles which may be exposed to sunlight.

Tire Inspection Machine

The Ramsdell Manufacturing Company of Cleveland, Ohio, has announced a lowered price of $47.50 for the tire inspection machine which the company manufactures. The machine has also been improved so that the fingers which engage the beads of the tire to spread it open reach from beneath the tire, leaving the entire inner surface uninterrupted for inspection or repair. Many of the machines are in use in sales branches of large tire manufacturers.

OXIDE PRICE INCREASE JUSTIFIED BY IMPORTER

The advance in the cost of natural red oxide during the past few months has been justified by the sharp increase in foreign exchange values, particularly of Spanish pesetas, and also a slight increase in the cost of production, according to Casper Smith, an official of the Smith Chemical and Color Company of New York, who discussed the price increase with a representative of THE RUBBER AGE.

"Not only is there every indication that Spanish currency will be at a high level throughout the balance of the current year", said Mr. Smith, "but the miners in the natural red oxide regions of Europe have recently been granted an increase in wages to conform with higher standards of living which have developed since the war. The more rigid and exacting demands of the rubber industry throughout the world have forced them to improve upon their previous production methods. It is therefore easy to see how a raise in the price of this commodity is inevitable.

"The United States consumes approximately 40% of the total European production of natural red oxides, thus making its importation a very important factor in our industry. Its use is becoming more and more widespread because of its high staining power and its comparatively low price for the results obtained."

AKRON-WILLIAMS A-W PRODUCTS

Heater Presses
Molds and Cores
Tubing Machines

THE WILLIAMS FOUNDRY & MACHINE CO.
"In Business Since 1888"
AKRON, OHIO

EMBOSSING CALENDERS
For Artificial Leather, Oil Cloth, Carriage and Automobile Covers

DRYING MACHINES
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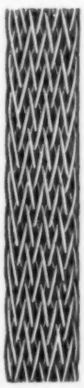

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WORLD TRADE IN TIRES NEARS 7,000,000 UNITS

American Exporters Surpass French in Casing Shipments Only When Canadian Plants Are Considered—British Gains Are Notable.

Exports of automobile casings from the principal manufacturing countries of the world have increased at an average of nearly a million a year during the past four years, according to estimates of the Rubber Division of the Department of Commerce. The world exports of casings in 1925 were estimated at 6,777,000. A comparison of this figure with the 5,131,000 casings exported in 1924, the 4,669,000 in 1923 and 3,839,000 in 1922 reveals a steady expansion in the demand for automobile tires throughout the world.

France and the United States have been the leading exporters of casings during the four-year period. Many of the largest American companies export from Canadian branch factories, and when the combined American and Canadian figures are considered, they rank highest in the world tire trade. Exports of casings from the United States in 1925 amounted to 1,770,000, reflecting a steady growth over the 1,389,000 exported in 1924, the 1,363,000 in 1923 and 1,326,000 in 1922. Canadian tire exports in 1925 were 848,000; 500,000 in 1924; 480,000 in 1923 and 293,000 in 1922. American manufacturers exported heavily from Canada in March, 1926, the total shipments for that month numbering 135,000 casings. The exports from the United States during the same period were 138,000.

France, however, has surpassed the United States in exports of casings when shipments from the United States alone are considered. The French exports of 1,872,000 casings in 1925, 1,677,000 in 1924 and 1,510,000 in 1923 show a considerable margin over the exports from the United States in the corresponding years. France looms large in the export casing trade and the Michelin tire, of which most of the French casing exports consist, is extremely popular in the world market. During March, 1926, France exported 234,000 casings, the heaviest on record for any single month.

Italy ranked third in the world tire trade during 1922, 1923 and 1924 but yielded before the increasing British exports in 1925. Italy exported 330,000 casings in 1922, 490,000 in 1923, 667,000 in 1924 and 801,000 in 1925. British exports of tires which were only 271,000 in 1922 have steadily advanced to 397,000 in 1923, 550,000 in 1924 and 872,000 in 1925. While the United Kingdom has not been in the front rank of the international tire trade for the past few years, the steady growth of her exports point to an increasing popularity of British tires.

Germany has not bulked large in the tire export trade as her rubber industry has been more or less disorganized since the War and concerned chiefly with supplying the domestic market. During 1923 Germany exported 252,000 casings but these exports have fallen off to 144,000 in 1924 and 175,000 in 1925.

Japan and Belgium are the only other countries of any importance exporting automobile casings. Japanese exports in 1925 numbered 295,000 casings, a considerable gain over the 118,000 shipped in 1924 and 135,000 in 1923. Belgium exports of casings during 1925 were 144,000 as compared with 86,000 in 1924 and 72,000 in 1923.

GERMAN RUBBER IMPORTS SHOW INCREASE IN 1925

The rehabilitation of the German rubber manufacturing industry in 1925 is evidenced by the increased crude rubber imports in that year according to a report of the Department of Commerce. Figures are now available to show that in that period 34,481 metric tons of crude rubber were imported and while undoubtedly stocks of crude rubber were increased, it is believed that fully 32,000 long tons were used by German rubber manufacturers.

The imports during the last three months of the year were much lower than during the earlier months probably as a result of the depression in the automotive and rubber goods trade. The net imports of gutta-percha in 1925 amounted to 174 metric tons and of balata 593 tons; 332 metric tons of scrap rubber were imported, chiefly from the United States.

Type of raincoats manufactured by natives in Central America by spreading Castilloa latex on coarse cloth and curing by sunlight. The coats retail for about $6.00, U.S. currency

IMPORTANT CANVAS SHOE FACTORY LOCATED AT NICE

Among the industries which have grown up in southern France since the War, according to the American consul at Nice, is a shoe manufacturing company, Caoutchouc Industrial du Sud, located at Nice and manufacturing a canvas shoe with a rubber sole under the trade mark C.I.S. "Au Soleil". The company was established five years ago and has become one of the most important of its kind in France.

The production capacity is 10,500 pairs of shoes a day and there are employed 600, chiefly women and girls. This firm makes five different models of shoes in three different colors, and in all sizes. The prices, computed in U.S. currency at the present exchange rate, range from $0.33 to $0.60 a pair, and it is understood that the finished product possesses good wearing qualities. In addition to the home market the Consul states that they sell in practically all countries in Europe, except Spain and Italy, as well as in Egypt, Algeria, Madagascar, Persia, Morocco, Brazil, Indo-China, Cuba and Australia.

Continental Progressing

The American trade commissioner at Berlin has written the Department of Commerce that despite the severe economic crisis, the scarcity of capital and the diminishing buying power throughout Germany, the Continental Rubber and Gutta Percha Company of Hanover has greatly enlarged its capacity for production and is still engaged in plans along that line. New buildings and new installations were and are being undertaken. A new departure has been the purchase of coal mines to furnish fuel for the company. Production and turnover are reported to have increased.

Golf Ball Imports

All of the 381,511 golf balls imported into the United States during May came from the United Kingdom. The average unit value of the balls was 40.7 cents. The total number of golf balls imported during the first five months of 1926 was 1,311,633 as compared to 1,163,407 in the corresponding period of 1925.

Pirelli Airship Fabrics

The manufacturers of Pirelli tires, made at Milan, Italy, have featured the fact in recent advertisements that the main fabrics of the airship, Norge, were produced at the Pirelli factories.

Few Tires Imported

During May 580 tires valued at $6,734 were imported into the United States of which Canada supplied 269, France 184 and Great Britain 27.

CHURCHILL PAYS TRIBUTE TO LATE LORD STEVENSON

Winston Churchill, present Chancellor of the Exchequer of the British Government, has published an appreciation of the late Lord Stevenson whose death was announced in the last issue of THE RUBBER AGE. It will be remembered that Mr. Churchill was Secretary of State for the Colonies when the rubber restriction laws were adopted, Lord Stevenson being the advisor who made the necessary investigation and recommendations which resulted in the "Stevenson Scheme". The tribute was worded, in part, as follows:

"Among all the ablest business men striving under war-time pressure to do their utmost for the country, he was always first or among the first. He brought to the conduct of public business not only exceptional organizing powers, but a practical sagacity and shrewdness in the handling of men and affairs before which difficulties of all kinds melted, and tangles, however intricate and confused, smoothed themselves out with incredible regularity. My own obligations to him are measureless. When the war was over he accompanied me, always in an honorary capacity, from the Ministry of Munitions to the War Office and later to the Colonial Office. In both these departments during the harassing years of the aftermath it was my practice to place in his hands the most awkward and baffling administrative questions with which those departments were encumbered. In every case a satisfactory solution of the difficulty was achieved."

H. Eric Miller has also given to the press an expression of the gratitude which British rubber growers feel toward Lord Stevenson for the work he did in their behalf.

To Honor Stadelman

A bronze tablet to the memory of G. M. Stadelman, the late president of the Goodyear Tire and Rubber Company, will be erected in the Men's Community Room in Goodyear Hall at Akron. The expense will be borne by employees who are now making donations under the auspices of the Goodyear Industrial Assembly.

Enterprise Receiver Asked

A petition asking for the appointment of a receiver for the Enterprise Rubber Company at Yardville, N. J., has been filed by Joseph Freiberg, treasurer and stockholder of the concern. He claims that the firm, which is engaged in the manufacture of rubber sundries, has assets of $10,000 against liabilities of $17,000.

Firestone Autobiography

A business autobiography by Harvey S. Firestone, entitled "Men and Rubber", is being brought out by Doubleday, Page & Co. The book comprises an intimate review of Mr. Firestone's many years' connection with the rubber industry.

CHEMISTS FROM ABROAD TO VISIT AKRON TIRE PLANTS

Akron rubber factories are scheduled to receive a visit in September from more than two hundred leading chemists of various countries who will be in the United States to attend the convention of the International Union of Pure and Applied Science at Washington. Immediately after adjournment of the sessions, the delegates will start on a tour of American industrial centers. Akron is expected to be the first city visited.

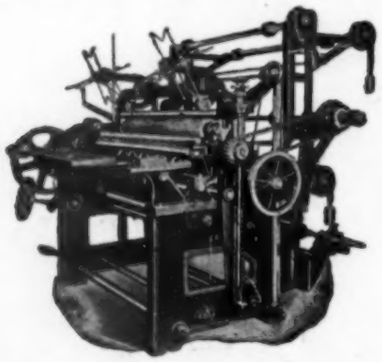
The Akron section of the American Chemical Society will entertain the visitors and is arranging the program for inspection of the tire plants. W. J. Kelly, secretary of the Akron section, is in charge of the plans.

New Fabric Warehouse

A new fabric warehouse, said to provide storage space for fully two million pounds of tire fabrics, has been completed by the Firestone Tire and Rubber Company as one of a number of additions which are being made to the plant at Akron. The new building is unique in that both ground floor and second floo are served by a railroad track, the uppe carrying eastbound cars, and the lower, westbound.

A big percentage of the tire fabric used by Firestone now comes from the company's own mills at Fall River, Mass. These mills are again in full operation following a curtailment of operations forced by a strike.

CAMACHINE 6-C



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The London Letter

The GENTLEMAN FROM MINCING LANE will report current opinion in London's famous rubber market in every issue of THE RUBBER AGE

This week the Gentleman says "All Is Serene".

LONDON, June 28, 1926.

LONDON, THAT IS, Mincing Lane and the rubber section of the Stock Exchange, is feeling comfortable and well tanned in the summer sun. "Let rubber be quiet for a while, say they", even including the speculators, "while we enjoy the summer which comes but once a year in England, if it comes at all". So Mincing Lane sits comfortably behind the 1/9 peg which the revised Stevenson scheme has seemed to provide, and refuses to be concerned over the rising figure for London stocks, the possible slowing up of American industries resulting in a decreased demand for British rubber, America's reclaimed rubber campaign, D. M. Figart's pamphlet entitled "America and Rubber Restriction", the New York rubber exchange, or anything else.

It is curious that the London price should continue to hover around 1/9, the figure arbitrarily set by the revised Stevenson scheme. Certainly it cannot be claimed that the Stevenson figure has determined the price during recent weeks, but with values quiet and steady, the extraordinary nearness of the average price thus far during this quarter (since May 1) to the figure set by the Stevenson scheme gives rubber interests another ponderable with which to play in making up their guesses as to the position next Fall.

So far this quarter the price has only averaged about seven-tenths of a pence over the required 1/9. During the balance of the quarter to the end of July the price will have to average below 1/8¼d. in order to bring the average for the quarter below the figure of 1/9, in which case a reduction of 20 per cent would be made in the exportable quota for Malaya and Ceylon. Today's price (June 21) is 1/8½d.

Prices lately have tended to harden slightly. One meets as many persons who hold the opinion that the 20 per cent reduction will be made as others who do not believe it will be taken off. With Malaya exporting today only from 90 to 95 per cent of the allowance, and and with an accumulation of permits which may be used if the figure does drop to 80 per cent the reduction in actual exports from August 1st on would be more nearly 10 per cent of present day figures than the 20 per cent taken off technically.

Rubber Stocks Increasing Steadily

London stocks during the week ended June 26 were increased by 1,136 tons to a total of 23,800 tons. The landings during the week were 2,228 tons. The withdrawals or deliveries were 1,092 tons. While the British consumption of raw rubber is small compared with that of America the reduced output of British rubber factories since the labor difficulties commenced on May 1st has been a factor in the situation. According to the Ministry of Labor, 11.6 per cent of the 60,570 workers in British rubber plants were employed on May 24, an increase in unemployment of 4.1 per cent as compared with April 26, and an increase of 2.6 per cent as compared with the same day a year before. Nevertheless, London rubber stocks cannot be considered large by anyone, as they only represent a few days' supply for the factories of the world. Of course, from an American point of view, the increase in world stocks is of immense value as a much needed stabilizer in the raw rubber market.

British rubber companies shares are in the hands of a wide range of shareholders, who are very pleased at the present time with large dividends, and shares are held tightly, so that most of the trading in the market lately has been by insiders, with values slightly advancing under the influence of the upward movement in the value of the raw material.

Use of Reclaimed Rubber Discounted

America's reclaimed programme has not been taken seriously in London, the view generally held by those who put any thought on the subject being that American tire manufacturers in the stress of the severe competition which they have encountered in recent years must have been using about as much reclaimed rubber as they could without materially affecting the quality of their tyres. To introduce too large quantities of reclaimed naturally would result in a shortening of the mileage and an intensification of the rubber demand later on, even though the demand for new rubber falls off for the time being. The average British motor car owner is not inclined to the tire economies which Ford users in the United States exercise; he cannot understand the attitude of mind of the Ford user who buys a tire largely made from reclaimed rubber and is proud of it when announcing the fact to his friends, and telling how long he has been running on reclaimed rubber.

With December, 1926, to March, 1927, futures in New York selling at a premium over spot prices, there is more talk in London about the possible influence of the New York rubber exchange, and the likelihood of larger quantities of American money going into a speculative boom, should one develop in the near future. In fact, the New York exchange may easily provide British apologists with a talking alibi in case rubber runs away again.

In general the British press has been content simply to quote from the booklet just issued by D. M. Figart (formerly special agent with the U. S. Department of Commerce), entitled "America and Rubber Restriction", and has refused to be aroused again over this excellent restatement of the American position, as seen by Mr. Figart. *The Manchester Guardian*, however,

has as usual maintained its freedom of thought and, true to its traditions, continues its criticism of government interference in business. Editorially they say:—

> "We drew attention to the hopeless stage of confusion and uncertainty into which this change in the original conditions of the Stevenson reduction scheme threw the whole situation from the consumer's point of view when the announcement of the change was made, and suggested that the change was calculated to increase the ill-will among foreign purchasers of rubber. This view is now set forth from the American standpoint in the booklet by Mr. David M. Figart (special agent of the Department of Commerce of the United States in 1923 and 1924), entitled "America and Rubber Restriction". 'Within a year' concludes the author, 'the price of rubber has fluctuated between 45 cents and $1.23 a pound. The new rules..... make probable a repetition of 1925 conditions, but in more aggravated form. Under the Stevenson plan, as formerly drawn, or as at present modified, there is no means of escaping the violent fluctuations in the price of rubber which are a constant menace to the existence, not to say prosperity, of our manufacturers'."

Yours Faithfully,
THE GENTLEMAN FROM MINCING LANE.

[Crude rubber stocks in London increased 1,263 tons during the week ending July 3, making a total of 25,063 tons on hand in that city. The London price continued steady at around 20¼ pence. The tire price reduction in the United States caused an immediate decline of from 10 to 50 points in the price for crude rubber futures on the New York Rubber Exchange. ED.]

Rubber Estate Profits

Bassett Rubber Company, Ltd.

The report at the recent annual general meeting of the Bassett Rubber Company, Ltd., in Penang is indicative of the general financial condition of the rubber estates in Malaya. The report showed a profit earned during the year of $115,984.52 (Straits Currency), an earning of approximately 18½ per cent of the company's issued capital. The earned profit in 1924 was $17,197.90.

The net price realized for the company's rubber to the end of December, 1925, was 97.94c (Straits) per pound, as compared with 44.14c in 1924. The total dividend paid to stockholders was 17½%.

Ledbury Rubber Estates, Ltd.

The address of Eric Macfayden at the annual meeting of the Ledbury Rubber Estates, Ltd. (of which he is chairman) held recently in London afforded an interesting illustration of the conservative systems of tapping now being adopted generally by British producers.

Mr. Macfayden said that throughout the Ledbury estates tapping is carried out on alternate days, in most fields on half, but in some on a quarter only of the tree, and with periods of complete rest for all fields at intervals. It is not proposed to make any change in this conservative system on account of the higher exportable allowance. It is regarded as a system consistent with the maintenance of the estates in a healthy condition and one that is productive of very profitable crops.

With this system in operation, the Ledbury found no difficulty in paying a 45 per cent dividend last year.

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EDITORIAL COMMENT

Tire Dealer Statistics

The recent efforts of a number of tire manufacturers to estimate the number of tires in the hands of dealers throughout the country would appear to substantiate the contention of some executives that the tire dealer stock surveys of the Department of Commerce should be on a quarterly instead of a semi-annual basis. The tire dealers' national organization has continued its "fact-finding" surveys, having one in progress among its limited membership at the present moment. This effort and the fact that the manufacturers are hazarding estimates should be sufficient evidence that both producers and distributors feel the need for definite information with regard to the summer stocks of tire dealers.

The tire dealer stock surveys of the Department of Commerce were begun in October, 1924, with the understanding that the Rubber Association would cooperate in making the work a success. Since that date a survey has been taken as of April 1 and October 1 of each year.

Fortunately, the Department has surrounded each of its surveys with identical conditions so that the results are entirely comparable. The Department's chief aim is to reveal the number of casings and tubes in the stock of the average dealer. After a number of surveys have been taken, the average number of tires per dealer may be used as a sort of index to the condition of their stocks as compared with past autumns or springs, which, after all, is what both the manufacturer and distributor wants to know. The averages announced in the various surveys have been based on useable returns from about 35,000 dealers which statisticians believe may be taken as a true cross-section of the whole.

One could not recommend a continuance, much less an extension, of the Department's work along this line if the results were not made available promptly for such figures are of no value if not known early enough to permit changes in production or purchasing schedules. It is gratifying that the huge task of sorting and compiling 35,000 or more returns has been regularly accomplished by the Department in time to permit the publication of a preliminary report in less than three weeks and a final report in less than a month.

Surveys of the stocks in the hands of its members have been taken on a quarterly basis by the National Tire Dealers' Association, but unfortunately only a few hundred dealers figure in such compilations and they are practically all from one class.

A few have urged that the Department of Commerce put its comprehensive surveys on a quarterly basis also. In that way the conditions of dealers' stocks in mid-summer and mid-winter would be known as well as in spring and autumn. If a survey in any quarter was thought unnecessary it could be omitted. A concerted demand to the Department for the more frequent surveys, especially if it were made known that the cooperation of the Rubber Association would be continued, would likely find a favorable reception and be productive of additional safeguards against expensive errors.

Philippine Rubber

In view of the pretext under which Congressman Bacon originally offered his bill for separating the southern Philippines from the other islands of the archipelago, American rubber manufacturers are not apt to receive with enthusiasm the recent disclosure that one of its main purposes, if not the leading one, is to facilitate rubber plantation development in Mindanao and other islands suited for that purpose. At the time the bill was introduced, Mr. Bacon discussed at length the need of the Moros for peace and religious freedom. Now it is revealed that an even more compelling need is that of America for rubber. In the Congressman's opinion the Moros would gladly supply the necessary lands without troublesome restrictions if they were given their independence from the Manila government.

Mr. Bacon's bill and his speeches interpreting it do not add a very edifying chapter to the history of American colonial management. If the bill was sincerely offered, it reveals the opinion of at least one Congressman that his colleagues are not going to deal straight-forwardly with the Philippine question. On the other hand, if the bill's only purpose is to scare the Filipino politicians into a more liberal policy toward American agricultural enterprise, the situation is just as displeasing to those who still hope for a real, respectable Philippine policy.

By the time Congress meets again, Carmi Thompson, now in the Philippines on a special mission for President Coolidge, may have a report ready on which Congress can act. Neither in that report nor in Congress is special attention to rubber necessary. Conditions under which the whole agricultural progress of the islands is logical will guarantee a satisfactory rubber development.

A Sensible Program

The news that the Dunlop Rubber Company is to begin the planting of 11,000 acres of rubber is refreshing, not only because the world is apt to need the product of that acreage but also because the program is a sensible one which will undoubtedly be carried out. Putting in even 11,000 acres is no trifling task as every experienced planter, including Dunlop, could testify. To accomplish it in one year would call for a tremendous organization. Yet reports have been handed about lightly concerning much larger projects—a million acres here, a hundred thousand there and so on. The results—or rather the lack of them—are also well known. The value of such projects seems to lie for the most part in the publicity that attends them. They have not yet served the cause of American rubber planting as much as two or three small companies that have started about their work without all the shouting and it sometimes seems questionable if they ever will. If and when a movement does get underway considerably to enlarge America's stake in rubber growing, it is to be hoped that the various announcements will include figures obviously reasonable and suggestive of accomplishment.

The Dutch Native Rubber Industry

Production of 72,000 Long Tons of Rubber by Native Holdings in 1925 Surprised Both British and Dutch Who Had Under-Estimated Number of Trees—Increase to 150,000 Tons by 1930 Forecast.

By E. G. Holt, *Chief, Rubber Division, Bureau of Foreign and Domestic Commerce*

NATIVE RUBBER IN WATER AT SEAPORT

THE WORLD production of rubber in 1925 was about 510,000 long tons, and of that amount no less than 14 per cent or 72,000 tons was native rubber (dry weight) from the Netherlands Indies. This compared with a production of not more than 3 per cent of the world total in 1920. The total production of wild and plantation rubber in all of tropical America and Africa in 1925 was less than half as great as the production of Dutch native rubber.

The importance of this tremendous increase in native rubber production can scarcely be over-emphasized. Except for the growth of native production, the British restriction scheme might have more seriously affected the rubber trade throughout the world in 1925 or possibly even before that time. That the increased production from native areas was entirely unforeseen by the British is not surprising since even the best-posted men in the Dutch Indies were unprepared for the development.

That a rubber producing industry of this size could be brought to the point of production without the Dutch authorities knowing all about it might be considered a criticism of their administration, but as a matter of fact there are several good reasons for the lack of definite information concerning it. Visualize, if you will, a number of islands ranging in size all the way from the area of Rhode Island to the combined areas of California and New York. Visualize a population of about thirteen millions outside Java and Sumatra East Coast, practically all primitive races, Dyaks and Malays, with a few Chinese.

Accurate Maps Are Lacking

Consider also the fact that the native rubber producing regions are mostly in residencies for which accurate, detailed maps do not exist and wherein there is no system of land registration. Furthermore, European officials connected with the forestry service number less than two dozen and even the total number of Dutch officials is very limited while the native area is largely covered with jungle growth, and often has slight transportation facilities other than by boats on the rivers.

These difficulties are obviously such as to preclude the gathering of reliable information. It is therefore not to be wondered at that the Dutch estimate that about 52,000,000 trees had been planted by natives before 1922 fell far short of the mark, or that D. M. Figart in making his otherwise accurate analysis of the Middle Eastern rubber plantation industry in 1924 failed accurately to gauge the potential output from native areas.

Complete and accurate data regarding what may be expected of the native rubber industry in the future is still lacking. Dutch authorities state that it would take four or five years to gather such data and check its accuracy. After the rapid increase in native rubber production which began in the closing months of 1922, and got well under way in 1923, the Dutch administrative officials realized the necessity of an investigation of the native industry and organized in 1924 a Native Rubber Investigation Committee which has since conducted a survey of the chief areas under development, namely Djambi, Bandjermasin, Pontianak, and Palembang. Surveys of other at present less important areas have not yet been attempted.

Native Industry Differs From European

Reports on the areas investigated have been published and have provided much valuable information. The author has not had the advantage of examining all the original reports but has studied carefully such data as has been translated and published in the foreign press. The Dutch native industry is not comparable with European rubber plantations in the Middle East, but on the contrary is in direct contrast with the accepted practice of practically all European owned rubber estates. It differs materially even from the native-owned plantations in Malaya which are estimated to have constituted 45 per cent of the total area planted in Malaya at the end of 1923. Many of the so-called Asiatic holdings in Malaya are large plantations owned by Chinese and operated systematically.

The owner of a native plantation usually develops it in the following manner. Land is almost as free to him as it was to the American Indian when America was first discovered. His livelihood is secured through raising crops of various kinds; his chief grain crop is rice. When he plants a plot of ground to rice, he plants rubber seeds or seedlings at the same time. After taking off a second crop of rice, he abandons the land to the young rubber trees, which have been planted from 400 to as high as 650 per acre.

Then for a period of three to five years no further attention is given to the plantation. The trees grow up thickly and with blukar (secondary forest growth) make an almost impenetrable growth. In some regions trees are planted in lallang grass which likewise makes a dense growth. The lallang and blukar naturally tend to retard the growth of the trees somewhat, but the rubber tree is hard to kill, and in a few years time, although

not so rapidly as on clean-cleared European plantations, the trees reach tapping size. Meantime the native owner has proceeded with further planting of rice and rubber, his only costs being those incident to securing rubber seeds and seedlings. Usually the work is done entirely by members of his family.

When the trees are large enough for tapping it becomes necessary to hire tappers, unless the number in the family is unusually large or the areas planted are relatively small. The usual practice is to hire tappers on a partnership basis, giving each tapper one-half of his daily harvest as his wage. Obviously it is to the tapper's advantage to secure as much rubber as possible, and accordingly he employs intensive and often destructive methods.

Careless Tapping Is Customary

There is no properly so-called "system" of tapping in vogue in the native rubber districts. Enough undergrowth is cleared to make the trees accessible and tapping begins. A tapper usually taps about 400 trees daily. Pursuing careless methods is customary, the amount of bark used for each tapping is unduly large, and the tree is frequently wounded. Tappers often tap trees twice daily, or make two or more bark incisions at one tapping.

These methods are naturally destructive to bark, which is the capital of the rubber producer, and open the way to disease of the trees. Owners, however, generally make no attempt to supervise the operations of tappers. The owners take a philosophical view and go on planting additional rubber trees; they can easily replace trees that are rendered useless through overtapping or destroyed through disease incident thereto. So the tapper proceeds, gathers his latex, coagulates it in an empty kerosene can or similar receptacle, rolls out a thick slab of rubber on a board with a rolling pin and turns it over to the owner in a wet condition all the way from 20 per cent to 50 per cent moisture and foreign matter.

The average daily crop per tapper is at least six pounds of wet rubber. The owner sells it next day or shortly thereafter and if he secures but 10 cents per pound or 60 cents for the slab of wet rubber, the tapper's wages would be 30 cents. With rubber at 30 cents per pound dry weight in New York, the average price paid the native producer for his wet rubber would probably be about 12 cents and the tapper's wage would be about 36 cents which is fully equal to the average on European plantations. With rubber at 90 cents per pound in New York, the average price paid the producer would be about 36 cents per pound wet weight and the tapper's wages would be $1.08. In many places tappers get a yield greater than six pounds per day; sometimes they get as high as 12 pounds of wet rubber. The latter yield would make the tapper's wages 72 cents per day when rubber is 30 cents per pound in New York and $2.16 when it is 90 cents. The income of a native owner who has several tappers in his employ may readily be imagined.

If the native owner happens to reside in the interior, his product may pass through several hands before it reaches the port of export. The merchandising of rubber on its way to the port is a battle of trickery through adulteration with foreign materials designed to add weight on the part of the seller, and through using false weighing instruments (dachings) on the part of the buyer.

Until the recent tax on native rubber exports became effective it is certain that the recorded exports were inaccurate to some degree, as rubber was not weighed by the customs officials upon exportation. The rubber formerly transported by stern-wheelers is now customarily floated downstream attached to rafts of bamboo and is sold on the beach at the river bank near the ports.

Local Remilling Unusual

After reaching the port, the rubber is sometimes reconditioned in local Chinese milling plants as at Pontianak where there are seven such mills in operation, but more often, as at Djambi, it is exported without treatment to Singapore where it is treated in the Singapore mills and exported as dry rubber in the form of smoked sheet or crepe. Dutch interests are now understood to be organizing a syndicate to operate mills for conditioning the rubber for direct shipment to consuming markets.

The above is believed to be a fair description of the methods employed in the native rubber industry in the Netherlands Indies. It remains to consider the extent of the industry and the probable course of its future developments.

As stated in an earlier paragraph, the 1925 production of native rubber was about 72,000 long tons. At seven acres per ton, which is the customary figure employed, this would have required 504,000 acres of rubber planted European style with 100 trees per acre when mature. With the larger number of trees per

This map of Sumatra and Borneo shows the principal native rubber districts. Their respective productions are stated on the next page.

acre in native areas, the production per acre is probably much higher, although the yield per tree is lower.

When the trees are tapped for the first time a very much higher yield per acre is obtained in native rubber areas than from European estates. Except for the added planting to replace trees killed or diseased, the native holdings might be expected to show decreased output as they become older and it is certain that the yield per acre will not increase in the same ratio as on European estates. However, tappers in native regions frequently do not tap trees the year round; they often tap one plot for a period of three months or thereabouts very intensively and destructively and then shift to a new area when the yield diminishes.

It is believed that the production per acre in native areas might average 600 pounds. If this figure is used as a basis, an area of 268,000 acres of tappable rubber would have been required to produce the 1925 output. At 400 trees per acre, such an area would have borne 107,520,000 trees. It is certain that these figures are conservative, both because of the fact that tappers frequently shift their place of operations during the year, and because the average number of trees per acre would be nearer 500 than 400.

NATIVE BOYS ROLLING OUT RUBBER WITH A BOTTLE

Figart estimated that 290,000 acres of native rubber had been planted in the Dutch East Indies at the end of 1921, although his forecast as to production from that area was conservative. It is probable that even the acreage estimate was too low because fires in the lallang and blukar during the 1920-1922 period destroyed a fairly important area of young rubber which was given no protection.

The area planted to tappable trees is now believed to exceed 300,000 acres, and planting has proceeded at a rapid rate in 1924 and 1925. The number of tappable trees stated above is more than double the 1922 estimate of Dutch officials which was that 52,000,000 trees constituted the total planted in native areas in the spring of that year. Besides the number of trees in tapping there must be many thousands of acres of younger rubber coming along as the result of planting operations in 1924 and 1925.

Rubber Output By Districts

The actual exports of native rubber as officially reported for 1925 for each of the Dutch Indies Outer Possessions, in units of metric tons of 1,000 kiles, wet weight, is as follows: Djambi District, 29,341; Bandjermasin Residency, 26,337; Pontianak, 21,572; Palembang, 18,234; Riouw, 10,314; Tapanelli, 6,012; Sumatra West Coast, 3,184; Atjah, 3,039; Bangka, 1,862; Lampoeng District, 1,822; Benkoelen, 533; Manado, 148; Billiton Island, 108; and Amboina Island, 5 metric tons. This gives a total of 122,561 metric tons or 120,625 long tons. Although 78 per cent of the total has come from the four leading centers of production in 1925, it is not impossible that native rubber may show as rapid a future development in other areas as it has in these centers in the past.

It may be stated here that in estimating the dry rubber content of native rubber exports, it is customary to allow 33⅓ per cent loss for moisture, dirt, and adulteration. For individual regions the allowance varies as follows: Djambi, 50 per cent; Bandjermasin, 40 per cent; Pontianak, 13 per cent; and Palembang, 30 per cent.

It may be noted that in this discussion I have used a figure of 72,000 tons dry weight as the 1925 exports of native rubber instead of 80,000 tons or two-thirds of the reported exports. This was done purposely to allow for possible smuggled rubber from Malaya, and to be on the conservative side. It is quite possible that the Dutch native production in 1925 actually reached 80,000 long tons dry weight.

For information concerning the probable future trend of production of native rubber I can cite no better qualified authority than Dr. A. A. L. Rutgers, Director of the Department of Agriculture and Commerce of the Dutch East Indies Government. In the course of a lecture at the Hague on November 27, 1925, Dr. Rutgers stated, according to press dispatches, that the native production by 1930 would be fully double that of 1925 and about 150,000 tons, if the price of rubber does not fall below one shilling per pound. That such a price level would be sufficient to keep the native interested is suggested by the rate of increase in Dutch native production during the period of low prices in the first half of 1924.

Estimate Thought To Be Too Liberal

A regular annual increase from 1925 to 1930 would depend largely on the price of rubber and the degree of overtapping. The latter if carried to excess might increase the yield in the next year or two at the expense of the yield later on. . The Malayan viewpoint is that Dr. Rutgers' estimate is too liberal, but it would appear that with the facilities at his disposal he should be as well informed on the subject as his critics, particularly since he has been closely in touch with the work of the Native Rubber Investigating Committee.

Should Dr. Rutgers' forecast prove trustworthy, a much needed supply of unlooked for rubber will be forthcoming in 1929-1930, just at the time the statisticians have considered it likely that an actual shortage would begin in earnest. Native rubber prevented restriction from having serious effects until 1925, it helped the industry from demoralization in 1925, and it may—and probably will—play a part of increasing importance in the coming years.

New Rubber Coagulants

Native Producers Save Money by Using Substitutes for Acetic Acid but Manufacturers Protest Lowered Quality

THE USE of sulphuric acid as a rubber coagulant, against which the Rubber Association of America recently filed a protest with the British and Dutch rubber growers' organizations, has been resorted to by native rubber growers in the Middle East, particularly in the Dutch East Indies, as a matter of economy. Very few, if any, of the European estates have adopted any substitute for the acetic acid commonly used.

At the present time the wholesale price in the United States of acetic acid of 60% concentration is a little more than seven cents per pound while sulphuric acid of a similar degree of concentration is available at slightly above one cent per pound. This six-cent difference in the wholesale price naturally becomes much greater by the time the acids are dispensed to individual users in the rubber producing countries.

Acid Purchased in Quantity

The quantity of acid used for coagulation is relatively so small that it may be wondered that the change to sulphuric would be attractive. Certainly the quantity needed by a native producer to coagulate his day's production of latex would not offer much opportunity for economy. However, when a supply for a fortnight or for a month, or perhaps an entire carboy, is being purchased, the economy is apparent and it is not surprising that the native chooses the cheaper acid. Whereas the product of the European estate is definitely known and is shipped to the manufacturer without change, it is well known that the quality of his product does not concern the native and he ships his rubber with the knowledge that it will all be remilled and will lose its identity long before the manufacturer sees it. Undoubtedly the question of sulphuric acid rendering his rubber less satisfactory for the manufacturer has never occurred to the native.

Alum has also been commonly used by the natives as a coagulating agent, about 3,000 tons of it having been imported into Sumatra in 1924. The rate of importation is known to have increased greatly during 1925 although exact figures are not yet available. The price of alum landed in the Dutch East Indies has been about three cents per pound, or considerably more than sulphuric acid.

Sulphuric Acid Retards Cure

Whereas the original coagulant, acetic acid, has aroused no objections, even when used carelessly, American rubber manufacturers are apparently in the right in protesting against the use of sulphuric acid as a substitute. It has long been acknowledged by chemists that sulphuric acid has a decidedly retarding effect on the rate of cure. After one test made in Malaya, B. J. Eaton announced that the time of cure of sheet rubber when prepared with sulphuric acid was 3 to 3.5 hours as compared with 2.5 hours when acetic acid had been used, other conditions surrounding the test being identical. In the case of crepe, the chemist found the prolongation in time of cure was from 3¼ to 4 hours.

Once in the rubber, the sulphuric acid could not be effectively removed except through the use of an alkali which would be equally objectionable. If remaining in sufficient quantities (and the carelessness of the native in its use is admitted), the acid might be expected to affect the cure through reaction with other ingredients mixed into the rubber.

The effect of alum is reported to be even more unfavorable to the quality of the finished rubber than is sulphuric acid. Experiments by de Vries have revealed that alum has a retarding influence in vulcanization also. However, alum has been used by the natives for some time without arousing objection on the part of the manufacturer. The growing prominence of native rubber in the world's markets will likely invite closer attention to coagulants and their effect after the rubber reaches the factory. The use of alum has presumedly been restricted to the Dutch East Indies; the Federated Malay States made its use illegal in 1919.

The British and Dutch growers have not yet had time to reply to the Rubber Association's protest. The response of the Dutch will be of particular interest.

Just how the use of sulphuric acid by the natives can be controlled is not entirely clear unless its distribution from the ports of entry can be put under a system of licenses. A registration of sales, much as is done for certain poisons in this country, could no doubt be effectively used in curbing its use by the natives and yet not interfere with its continued use in industries where it is not harmful. However, the expense of regulating such a system might easily be greater than the Dutch colonial authorities would feel warranted in undertaking.

Use of Formic Acid Approved

A recent report of the general experiment station of the East Coast of Sumatra Planters' Association states that economy can be effected in coagulation by the use of formic acid in place of acetic. Only half as much formic acid is needed, and the price by volume is the same as that of acetic. As a result, some estates are expected to change over to formic acid.

The drying and smoking period in the case of crepe and sheet respectively remain unchanged when either formic or acetic acid is used. Neither were any differences observed with the use of formic acid in regard to the susceptibility of the rubber to mould. The color and hardness of rubber prepared with formic acid are absolutely the same as in the case of the product prepared with acetic acid.

Investigations made by the Central Rubber Station (Buitenzorg) showed that the period of vulcanization, tensile strength, etc., remained practically unchanged when formic was substituted for acetic; the plasticity of the product increased to some extent, which is considered a favorable change. In factory mixtures, too, no difference was ascertained in samples prepared with the use of formic and acetic acids. It has been provisionally decided that the formic acid should be of a strength of 85 per cent or higher and that no formaldehyde or other harmful components should be present in it.

Improved Rubber Mixing Rolls

Engineers of All Countries Have Contributed to Making Equipment More Efficient and Less Liable to Breakage

A review by P. Hoffman of the improvements made in the design and control of rubber mixing rolls and accessory devices has recently been published by *Gummi-Zeitung*. Since the article appears to cover the subject so thoroughly and to be of such interest to American rubber mill engineers, *The Rubber Age* has arranged at some expense for expert translation of it and the reproduction of the diagrams as used in *Gummi-Zeitung*. On account of space limitations in the present issue, a part of the article is being carried forward for publication on July 25. The present installment deals with speed and breakage control and the use of improved accessories.

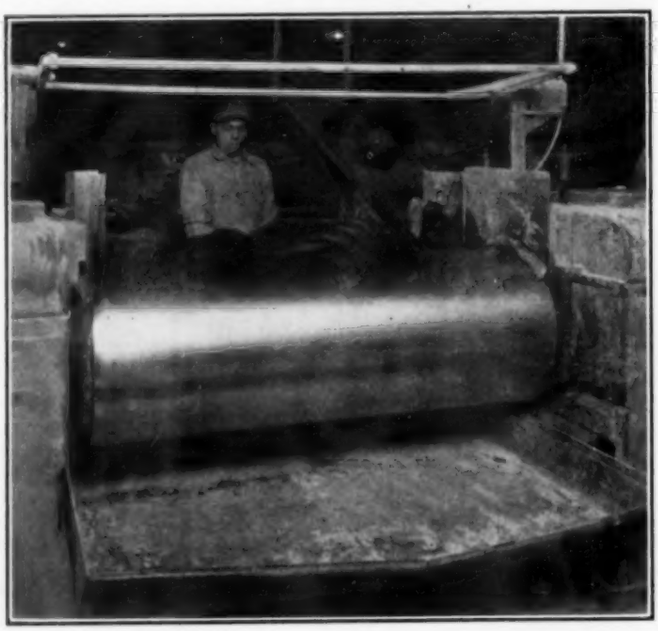
IN RUBBER mixing it is important that the speed of the mixing rolls be regulated to conform with the properties of the rubber being worked up and the composition of the rubber mixture. Whereas in the old designs of mixing rolls there was only one definite setting of the gears for the two rolls with the result that a change in speed of the machine was practically impossible, changes have been made in the construction of the apparatus so that different gear drives are now provided for the individual rolls, and the rolls are properly connected by means of suitable gearing so that their speed can be regulated. But in this case also we are limited to comparatively small roll velocities unless the driving mechanism of the roll is made very complicated which would lower the safety and surety of the entire operation of the rolls.

Frederick Iddon in Leyland, England, has obtained a wide degree of regularity by driving each individual roll of the mixing machine by its own separate motor. For this purpose special motors which could be controlled were employed, being connected with the rolls by the usual type of power transmission apparatus. Hence, it is possible by corresponding control of the individual motors not only to change the direction of rotation of the rolls but also to alter the speeds of the motors within very wide limits. The manner in which the motors can be controlled can be taught to the tender of the mixing machine and it is also possible to record their control in a central operating office so that it is always possible to attain accurate control of the operation of each individual mixing machine.

Uniform regulation of the rolls is necessary for obtaining uniform rubber mixtures. As the various set screws which act on the adjustable rolls are in general turned by means of special keys and the like, the regulation of the rolls and the regularity of their operation depends much upon the care given to this matter by the tender of the mixing machine. In earlier times the practice was adopted by providing one and the same movement for the two set screws, somewhat as in the case of calender rolls, but more recently simple indicators are provided which allow the individual setting of the set screws. They consist, for example, of cylindrical sockets or of discs fastened to the forward end of the set screws. They are provided with graduations which move past a pointer fixed to the screw nut or the frame of the machine.

Such arrangements make it possible to avoid the rolls being askew or obliquely inclined toward each other and also to prevent the breaking of the rolls themselves. This has the effect of removing one of the causes of breakage. However, there are still other causes which are due the character of the material being mixed and the manner in which it is fed into the rolls. These make it necessary to have some mechanical device on the machine to avoid breaking the rolls.

To this end, Soyer in Paris has used springs to act on the bearings of the roll which cannot be adjusted. This posterior roll just like the adjustable roll which is located in the front part of the machine therefore rests in sliding bearings. The springs push the rear roll constantly against the front roll, and take up any undue pressure which occurs between the two rolls for any reason whatsoever, as soon as it attains a certain fixed maximum. Then the springs are pressed together and at the same time the rear roll is pushed backwards, away from the front roll. After the pressure is relieved, the springs push the rear roll again into its original forward position.



Type of Mill in Common Use Lacking Many of the Refinements Mentioned in Accompanying Article on Improved Rubber Mixing Rolls.

The Dunlop Rubber Company avoids breaking in the mixing rolls by means of an arrangement which is seen in Figure 1, in vertical cross-section. The female thread which is arranged in the ordinary manner in the roll setting 1 for the threaded spindle 3 consists of two bushings 2 and 4 which slide axially over one another. They are provided with threaded flanges 5 and 6 at the inner end, which are filled with white metal. This is shown in the dark section in the figure. When an undue pressure is exerted on the rolls, then a cutting action is effected on the white metal and the inner bushing or collar 4 is pushed outward. In this manner the threaded spindle can give way several times until the cohesion

between the two collars 2 and 4 is relieved. The white metal filling can then be easily renewed.

In accordance with the design of mixing roll as developed by Elmer Clark in Akron, Ohio, which is seen in part in Figure 2, the set screws 1 do not act as usual in the horizontal direction directly on the roll bearings, but they are arranged in a vertical position and serve to shift the position of a conical part shown at 2. This part is connected with the lower end of the screw 1 and is moved over the vertical sliding surface of the roll setting 4. The conical surface of this part comes in contact with the slanting surface 5 of the roll bearing 6.

Using the Control Screw

When the screw is turned down, then the roll is correspondingly shoved against the fixed roll, and when it is turned up it is possible for the roll to move away from contact with the fixed roll. The conical part 2 is made to move laterally against the roll by means of its connection with the screw 1, as may be easily seen from the figure. Furthermore, the connection between this part and the set screw is made in such a simple manner that it is easy to remove one part and substitute another for it. Furthermore, it is made hollow and is dimensioned in such a manner that when the pressure is too high, it breaks and in this way it serves as a safety device against breakge of the rolls.

In order to remove the rubber mixture which adheres to the mixing roll, it is customary to employ special forms of scraping devices or doctors, as they are commonly known. In the design of mixing rolls which has been developed by Brunner in Trenton, N. J., these doctors are made in such a manner as to be movable sideways in fixed guides and are pressed constantly against the roll by means of a weight-loaded lever. Francis Shaw & Co. in Bradford, on the other hand, makes the scraping device in such a manner that it is joined to a rod which is movable vertically by means of a threaded spindle, which may be rotated in any manner around its axis. This makes it possible for the doctor to assume any inclined position with respect to the roll.

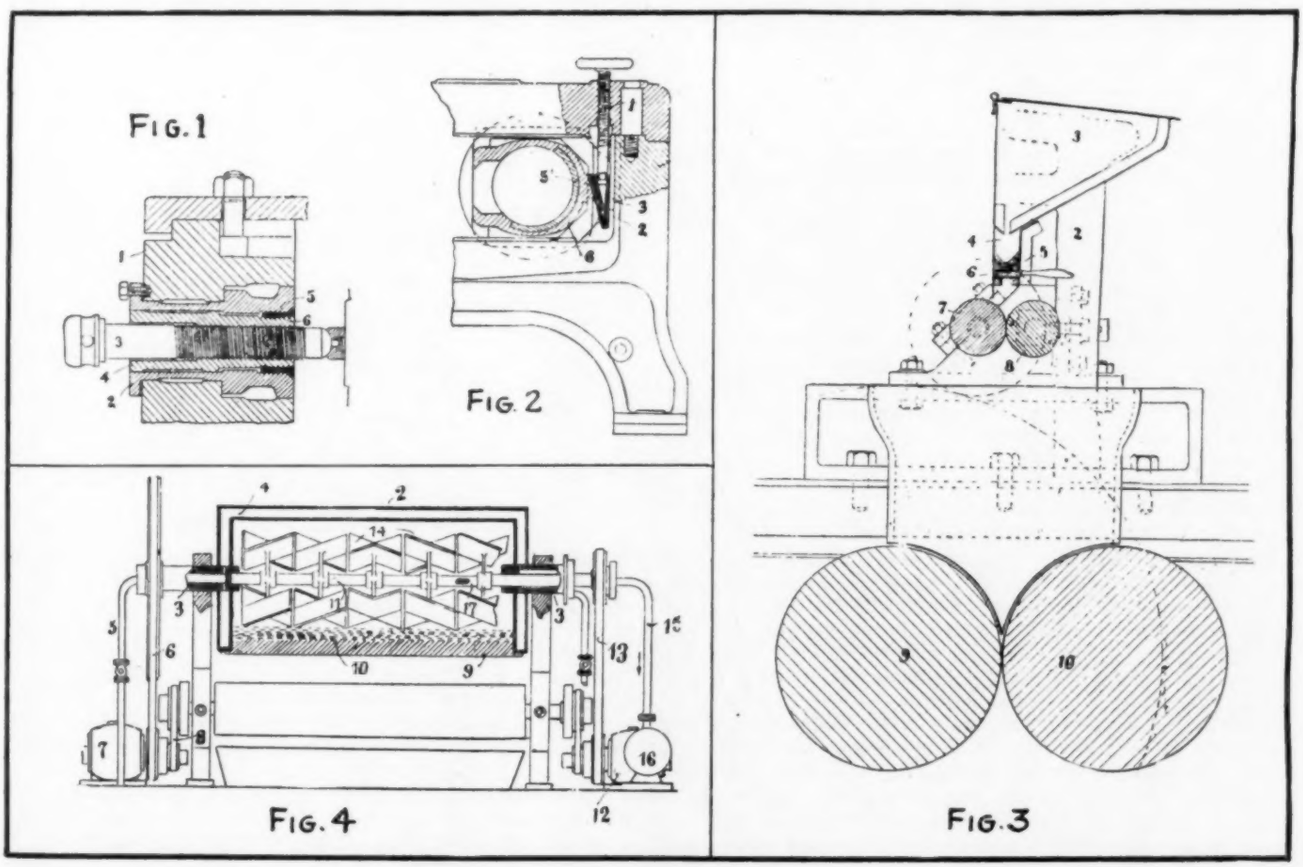
The devices which are used for feeding the rubber mixture to the mixing rolls form an important part of the machine, and for this reason special attention must be paid to their design and construction. Accordingly, a large number of automatic feeding devices have been designed with the express purpose of making this operation independent of the machine operator. For example, Figure 3 shows a type of automatic feeding device on the mixing machine put out by Wood-Milne Limited of Manchester.

Above the main part of the machine 1, which carries the rolls, a container 3 is supported on the uprights 2. This container holds the pulverized materials that are to be mixed with the rubber. The container or hopper 3 ends in a slit 4 which is closed by the distributing device 5. This device is provided with a number of perforations which lie close together and it contains likewise a perforated disc 6, which can be pulled out or pushed in, as the case may be, and in accordance with the position of this disc more or less material is allowed to sift through the perforations in the distributor 5.

The material that falls through reaches a grinding roll set which consists of two horizontal rolls 7 and 8, and from this point it reaches the main mixing rolls 9 and 10. For admixtures for which passage through the distributor is not essential, a second container may be arranged close to the container 3 from which the material can reach the grinding rolls 7 and 8 without first passing through the distributor.

A Different Feeding Device

Another arrangement of a feeding device is seen in Figure 4. The two mixing rolls are seen at 1 and a drum is arranged above them which rotates on a hollow shaft 3 and which is provided with a heating jacket 4. Steam is allowed to enter through the pipe 5 and the hollow bearings 3, and the drum is rotated by means of the belt 6 and the motor 7, which also drives the mixing rolls themselves by means of the belt 8. The drum is provided with a cover 9 which has a suitable opening in it that can be opened and closed. A fine-meshed screen is stretched within the interior of the drum. On a shaft which is arranged within the axle of the drum and which is driven independently of the drum itself by means of the motor 12 and the belt 13, a number of agitating blades 14 are fastened. These are provided with brushes which are made of



wire, rubber or the like. The shaft 11 is also hollow and is connected by means of the pipe 15 to a vacuum pump 16 and is also provided with an opening 17 which can be opened and closed through a filter, so that the drum can be emptied through the hollow shaft 11.

Mixing and Drying at One Time

After the drum 2 has been filled with the materials that are to be admixed with the rubber, the cover 9 is closed and the drum and the agitator shaft are set into motion. At the same time the drum is heated by allowing steam to enter the heating jacket and the vacuum pump 16 is also started. Hence, while the materials in the drum are being thoroughly mixed together and finely distributed amongst one another, the water contained in them is evaporated and sucked out of the drum. After these materials have been sufficiently worked up, the drum is stopped rotating with the opening facing the bottom; the cover is removed and the stirring apparatus is set into motion once again. In this manner the mixed materials are made to pass through the screen 10 and fall on to the rubber that is found on the rolls 1, and by rotating the rolls the ingredients are thoroughly mixed together to form a homogeneous mass.

Inasmuch as this treatment of the rubber is essential for the correct distribution of the admixed substances and their proper and integral admixture with the rubber itself, Adrian O. Abbott, Jr. of Detroit has designed a machine for mechanically carrying out these operations as may be seen in Figure 5. Above the front roll 1 of the mixing roll, set in a suitable support 2, there is an arrangement of a vertical frame. A rope hung with a weight at its free end is connected with the frame. A fixed guide rod 4 is arranged on this frame and a block 6 can be moved along this guide rod and is provided with a knife 5. An endless rope 7 is connected with this block, and this rope is led over guide rollers 8 and a pulley 9. At the rear of the block 6 there is arranged a roll 6 which can run along a guide device 11 and 12 which is made adjustable to both the rear and front side of the block.

When the roll runs along on the top side, then the cutting action of the knife comes in contact with the roll, and when the block runs along its under-side, then the block 6 is turned in such a fashion that the cutting action of the knife is removed from contact with the roll. In order to make possible this movement of the block, the guides 11 and 12 are planed off at the ends and are held in the guide pieces by means of springs. The shifting of the knife block along the roll is effected by the movement of the pulley 9, which is rotatable on a bearing 13 which is connected with the aid of the rod 14 to a piston that moves in an air cylinder 15. A geared wheel 16, which rests on the bearing 13 as well makes connection with a rack 17.

Hand Levers for Control

The control of the air pressure cylinder is effected by means of a valve located in the housing 18, whose connecting rods 19 and 20 are interconnected by means of a lever, while the rod 19 is made to move by means of the spring device 21 in conjunction with the rod 22, which is actuated by the pulley 9. The control levers can be moved by hand, and for this purpose a hand lever 23 is provided, whereby the rod 22 is made to move in such a fashion that the spring device 21 does not come in contact with the valve rod 19.

At the end of the roll 1, guide members 25 are provided and the knife reaches the edge of these guides in its movement. This can be seen in the figure. The device 26, which is part of the guide 25, is provided for the purpose of lifting the rubber from the edge of the rolls and rolling it up. When the various parts are found in the positions as indicated in the figure, then the knife 5 moves towards the right and cuts the rubber from the roll 1. As soon as the knife reaches the middle of the roll, the roller runs along the rear side of the block 6 through the slit between the guide devices 11 and 12 and in this manner it breaks contact with the upper side of the guide 11 and makes contact with the under-side of the guide 12, and the result is that the knife is lifted off the roll.

Now when the knife moves more to the right, there is no cutting action on the rubber. When the knife reaches the end of its path in the open end of the member 25, then the air piston is set in reverse motion by the action of the member 21 on the valve stem 19. The knife 5 then moves to the left, whereat the roll runs on the top side of the guide 12 and then the knife exerts its cutting action on the rubber. The knife is lifted off the roll in its middle; at the left end of the path of travel of the knife the reversal of the motion of the air pressure piston takes place and the change in the movement of the knife as well and so on. Hence the rubber is alternately cut from the edge of the middle and one piece is covered over the other without the operator laying a hand on it. There is nothing which stands in the way of duplicating the arrangement so that the rubber on the roll can be cut simultaneously from both ends.

The mixed rubber can then be removed from the mixing rolls and rolled up in the usual manner or else it can be removed in the form of narrow strips when it is to be worked up further in the tire press. In order to avoid any difficulties in the operation of the tire press, due to irregular widths of rubber strips, there has been patented a device, as shown in Figure 6, for removing the rubber from the mixing rolls (Sebastian Dietrich).

The framework of the mixing rolls is shown at 1 and to this there is fastened by means of the bolts 2 a support 3 on which the two rolls 4 and 5 are fixed. An endless belt 6 travels around these rolls. The arrangement is such a one that the roll 4 comes into direct contact with the mixing roll 7 and the result is that the belt 6 is carried along with this roll. A supporting table is placed under the belt between the rollers 4 and 5, as can be seen at 8 in the figure.

Removing Rubber Strips From Roll

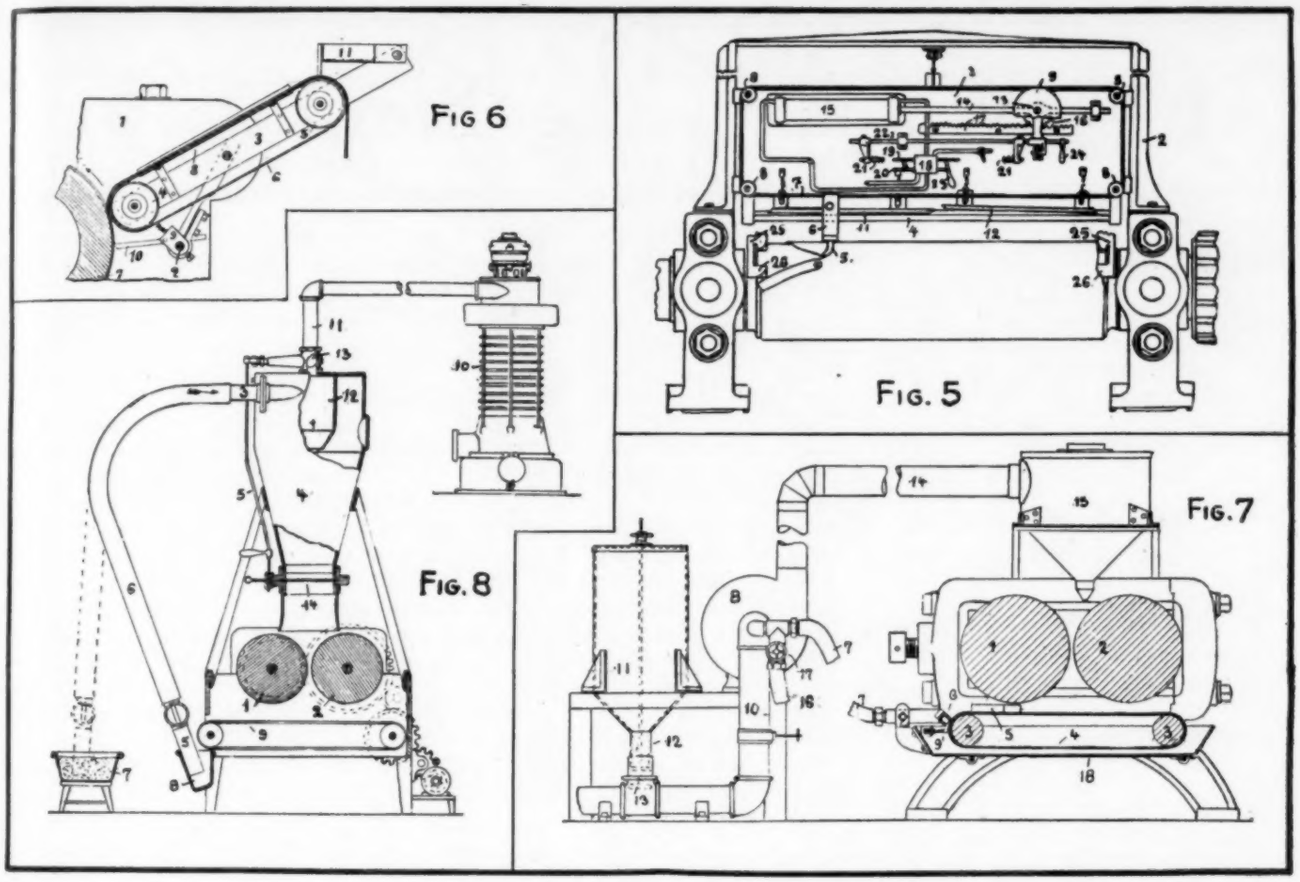
Underneath the roll 4 there are arranged two knife carriers 9. In these is located the knife 10 which is constantly pressed against the mixing roll 7. The knife accordingly cuts a strip of rubber from the mass that covers the roll 7 and that is taken up by the belt 6 and is led over the table 8 and finally reaches the roll 5. Under certain conditions talc or the like can be strewn over the surface of the rubber strips. This is accomplished by means of a container 11 which is provided with a perforated bottom and which is located over the roller 5. This box is shaken from time to time by coming in contact with a cam and this aids in the emission of the filler from it. If the operation is to be carried out in an uninterrupted manner, then care must be taken to see that the space which is left open on the roller due to the removal of a strip of rubber is filled up again with new rubber. This is accomplished by having the attendant fill rubber on to the roller 7 from time to time, so that there is always a constant supply of rubber being mixed together between the rolls. It is customary to take this rubber from the finished mixings which are delivered by the machine.

In the mixing rolls which have been dscribed up to this point a trough is provided underneath the rolls from which the mixer removes the finished mixings which fall into it from time to time but in the newer machines of American make special arrangements are provided for carrying out this operation. Such a machine is seen in Figure 7. This machine has been designed by William Jameson in Chicopee Falls, Massachusetts.

Conveyor Belt for Mixings

Under the two mixing rolls 1 and 2 there runs an endless belt 4 over the rollers 3. This belt can be driven in such a manner that the mixings which drop down on it are carried to the left. In the course of its travel it is constantly pushed towards the center of the belt by means of the obliquely placed doctors 5 and finally reaches a point opposite the wide suction openings 6, which are connected with the suction side of a pump 8 by means of the flexible pipe 7. Underneath the mouthpiece 6 there are arranged a series of brushes 9 which prevent the mixings falling off the carrier belt 4.

The suction pipe 10 of the fan 8 is connected with a number of containers 11. These hold the mixings and are connected with the suction pipe by means of short pieces of piping 12.



The quantity of mixed rubber which runs out of the containers 11 is accurately regulated by means of the valve 13. The pressure tube 14 of the fan opens up into a collecting vessel 15, and the mixed rubber runs out of this container through the funnel over the rolls 2. The rubber is then mixed between the rolls. A second tube 16, which can be bent at will, and which can be connected with the suction pipe 10 by means of a valve 17, is connected with a suction pump at its free end, through which means the material that falls into the trough 18 can be readily removed. This apparatus makes it possible to do away with much of the hand labor that is required around the ordinary form of mixing machine. In addition thereto it possesses the advantage of preventing completely all injurious dust formation.

Use of Suction Pipe

Figure 8 shows a type of machine which has been patented by Ira H. Spencer of West Hartford, Connecticut, in which the mixed rubber mass is carried into a collecting chamber 4, which is located above the rolls 1 and 2, by means of suction. To this end a pipe 3 is connected tangentially to the collecting chamber, and the end of this pipe is connected by means of a flexible hose 6 with the suction apparatus 5. The suction pump 5 can either be placed in contact with a mixture of rubber in the vessel 7 or it can be placed in the trough 8, into which the rubber mixture, which falls down between the rolls, is brought by means of an endless conveyor 9. A suction pump 10 is used to create a vacuum in the collecting chamber 4, and this pump is connected by means of the pipe 11 to a centrally-located part 12 within the collecting chamber.

In the pipe 11 there is placed a valve 13, and in the lower part of the collecting chamber there is also located a slide valve 14. By means of the rod 15 both the slide valve and the valve 13 are connected in such a manner that the opening of the slide valve can be effected only when the valve 13 is closed. This is effected in a simple manner, by inserting the rod 15 through a fixed guide and also through a hole bored into the slide valve. Then the slide valve is moved only after the rod 15 has been raised to such a point that it loosens the slide valve. However in this position the valve 13 is in the closed position, and it must remain so, until the slide valve is again closed, for it is only in this position that the rod 15 finds a free path for the movement of the valve 13 through the hole in the slide valve. The sucking out of the mixed rubber mass from the collecting chamber can then take place only when the slide valve is closed, as it is only in this position that there is any connection between the chamber and the suction pump. During the introduction of the fillers, etc., to the rubber that is being mixed between the rolls, on the other hand, the pump has no action whatsoever on the mixed mass of materials.

The conveyor which is arranged underneath the rolls can itself be used for conducting the rubber mixture that drops down between the rolls to the mouth of the rolls. Such arrangements have been used for quite a long time both in America and France. For this purpose the conveyor belt, made in suitable length, is not only led between two rollers, but a third roller is also provided. The third roller is placed above the axis of the front mixing roll so that the rubber mass that is carried along by the belt, on leaving the latter, is taken up by the roll and carried to the mouth of the mixing rolls. This third guide roller and the belt that is led over it are however impediments and cause difficulties in the treatment of the rubber mixture. Hence steps must be taken to see that the roller and the belt can be quickly and safely removed, in order to make the mixing rolls accessible.

[*To Be Concluded in the July 25 issue*]

Recovery of Rubber and Fabric From Old Rubber

French Patent No. 593,602.

Rubber goods which contain fabric, such as tires and the like, are heated in a closed vessel at a temperature of 180 to 200 degrees C with the ad-mixture of copper turnings and a solvent for rubber. The rubber can then be removed from the adhering fabric by washing with benzine. The fabric which is obtained in this fashion can be used again after it has been bleached and the rubber is desulphurized to a great degree.

Watching the News

ON ACCOUNT OF the rapidity with which he was dispensing ideas at the recent meeting of Greater New York tire dealers, Congressman Loring M. Black did not attract much attention with his suggestion as to the way in which the entrance of American capital into rubber growing could be stimulated. In fact, he devoted only a single sentence to it but his idea might easily have been made the topic of an entire evening's talk. Briefly expressed, the Congressman's suggestion is that an import duty of an amount to be decided upon should be imposed on all rubber entering the United States which was not produced in American territory or by American capital. However, this duty would not take effect until seven to ten years hence although the necessary legislation would be passed at once. Thus, Americans carrying out planting programs promptly would be sure of a definite advantage when the time came for marketing their product. Manufacturers who had arranged to produce a large part of their crude rubber supply would be able to bring it in free of duty and thus undersell competitors who had not followed that plan and who were compelled to manufacture their goods from foreign rubber on which a duty of a few cents per pound had been paid. Here is a scheme as ingenious as rubber restriction itself!

It is too bad that Mr. Black waited until Congress was adjourning before bringing his plan to the stage where the legislators could have discussed it.

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IF THE PUBLIC believes all it reads about different rubber planting parties and projects, it must feel sure that the problem of an adequate rubber supply has been completely solved. The latest report concerns the Florida everglades which are to be drained and turned into a vast rubber plantation which, it is asserted, will produce sufficient rubber to make the United States independent of foreign sources. Drainage for rubber alone would be profitable, according to the author of the article, but the land is so rich that the farm and garden products it would produce would pay for the draining in a year or two. The Secretary of Agriculture is opposing the reclamation unless some provision can be made to restrict the use of the land to non-competitive crops. The official who will oppose the project unless the rubber growing idea is dropped also has not yet come forward.

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IN SOME VILLAGE far away in the southern Philippines, the natives might well be wondering if Edgar B. Davis, now on his way to inspect rubber lands in their territory, will bring to them such wealth as he left behind in Luling, Texas, when he closed out his oil holdings recently. Luling has a population of only 1,500 and when a bonus of $2,000,000 was distributed by the departing operator, almost everyone was made rich. The bonuses ranged as high as $200,000 each for five employees down to a few hundreds or thousands for many others. Those who had been with Mr Davis' company more than three years received a bonus of 100%, equalling all they had drawn in salaries during their entire employment. Having provided more gasoline to run more automobiles, Mr. Davis now seeks to grow more rubber to make more tires. His present journey is a reflection of the faith and interest which he has had in rubber growing ever since he pioneered what have become the world's largest plantations.

THE COAL INDUSTRY of Great Britain is in difficulties which rival or surpass those of the British rubber plantation industry in 1922. Among the remedies prominently suggested is one based on the "survival of the fittest", a policy firmly rejected in the case of rubber. Sir Josiah Stamp, the internationally-known British economist, is advocating that from 200 to 400 of the older or poorly-equipped mines be arbitrarily abandoned. The remaining mines would produce coal enough to satisfy the demand. This is rather a different remedy from the Stevenson plan which brought even the weakest of the rubber plantations back to life and carried them through the crisis without a single fatality. Not having the same control over the world's coal market that their brethern had over the rubber market, Britain's coal miners and operators will likely have to accept some different and less pleasant solution of their problem.

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IF CURRENT REPORTS as to the unreadiness of the already-opened Sesqui-Centennial are correct, the managers of the big Philadelphia show may well pray for such a deliverer as the late Lord Stevenson proved to be in the case of Wembley. The British press has been busy recalling one of Lord Stevenson's accomplishments which is not so well known in the United States as is his rubber restriction scheme. The huge British Empire exposition had gotten into such a tangle that it was threatening to prove a bad advertisement for the empire instead of the good one that had been expected. Stevenson, who had acquired a reputation for "pulling things together", was induced to take over its management. The exposition was made a famous success, while Stevenson got a peerage and enhanced prestige as an organizer.

STATISTICAL SECTION

TIRES & TUBES
CRUDE RUBBER

AUTOMOBILES
GASOLINE

THE CONTINUED weakness of crude rubber prices in London has brought the average price for May and June down almost to the 21 pence which must be maintained to avert a reduction in rubber exports from Malaya and Ceylon under the revised Stevenson restriction scheme. In the London price table on this page, which has just been brought up-to-date under the plan covering the entire statistical section, it is indicated that the approximate average, up to and including July 2, stands at 21.38 pence. An average of 20.3 pence throughout the remainder of July would yield an average of almost exactly 21 pence for the entire quarter and result in the British rubber producing colonies being kept on a 100 per cent basis. Apparently, a continuation of the daily 20¼ pence, which has obtained on seven out of the last eight market days, would not be quite sufficient to prevent the quarterly average from falling below 21 pence.

Average Spot Closing Prices--Ribbed Smoked Sheets

(New York Market)

Average Price per Pound for Years 1910-1920

Year	Cents	Year	Cents	Year	Cents
1910	206.60	1914	65.33	1918	60.15
1911	141.30	1915	65.85	1919	48.70
1912	121.60	1916	72.50	1920	36.30
1913	82.04	1917	72.23		

Average Monthly Price per Pound since 1921

Months	1921 Cents	1922 Cents	1923 Cents	1924 Cents	1925 Cents	1926 Cents
Jan.	19.18	18.82	32.73	25.86	36.71	79.50
Feb.	17.96	16.12	35.14	25.29	36.01	62.25
Mar.	17.05	14.53	34.21	22.83	41.00	59.00
Apr.	16.73	15.99	32.48	22.51	43.64	51.25
May	15.82	15.25	27.39	19.89	58.47	47.75
June	12.49	15.11	26.88	18.81	77.26	42.50
July	14.01	14.67	26.10	22.16	103.16	
Aug.	14.04	13.93	28.84	26.17	82.99	
Sept.	14.53	14.44	28.95	27.56	88.88	
Oct.	16.02	19.78	26.93	31.13	98.01	
Nov.	18.06	23.88	27.14	34.33	104.80	
Dec.	20.47	27.42	26.60	37.88	98.51	
Average for Year	16.36	17.50	29.45	26.20	72 46	

London Closing Prices of Ribbed Smoked Sheet

(In pence per pound)

Fourth Restriction Year—Third Quarter

Day	May	June	July	Day	May	June	July
1	24	20½	20¼	16	——	20¾	
2	——	19¾	20¼	17	22½	20¾	
3	23½	20¼		18	21¾	20¾	
4	24¾	20½		19	22½	20¼	
5	24¼	20½		20	22¼	——	
6	23¼	——		21	22	20½	
7	23½	20		22	——	20¾	
8	——	20¼		23	——	20½	
9	——	20½		24	——	20¼	
10	23½	20¼		25	21	20¼	
11	23¼	20½		26	20¾	20¼	
12	23¾	20¾		27	20¾	——	
13	23	——		28	20¾	20	
14	22¾	20½		29	——	20¼	
15	——	20½		30	——	20¼	
				31	20½	——	

(The average price for the period for which daily prices are reported above is approximately 21.38 pence. The British Colonial Secretary has announced that only 80% of the standard production will be exportable from the restricted area during the next quarter if the price during the entire current quarter does not average at least 21 pence.)

Average Price in Previous Quarters

Quarter	1922-23	1923-24	1924-25	1925-26
Nov-Jan	14.285	14.175	17.9983	46.709
Feb-Apr	16.858	12.917	19.356	28.103
May-July	14.242	10.974	32.469	
Aug-Oct	14.944	14.632	43.269	

U. S. Imports and Exports of Crude Rubber.

YEARS	Gross Imports: Long Tons	Gross Imports: Total Declared Value	Gross Imports: Average Declared Value per pound Cents	Re-exports: Long Tons	Re-exports: Total Declared Value	Re-exports: Average Declared Value per pound Cents	Net Imports: Long Tons
1900	22,026	$28,577,789	57.92	1,718	$2,839,668	73.77	20,308
1901	24,617	28,120,218	51.00	1,663	2,425,727	65.11	22,954
1902	22,702	25,158,591	49.47	1,457	1,877,698	57.52	21,245
1903	24,886	35,152,642	63.06	1,646	2,598,416	70.47	23,240
1904	27,629	43,784,297	70.75	1,540	2,749,234	79.70	26,089
1905	28,637	48,517,906	75.63	1,616	3,149,989	87.00	27,021
1906	30,316	53,391,137	78.62	1,676	3,153,775	84.02	28,640
1907	50,649	49,813,361	72.56	1,832	3,509,902	85.55	28,817
1908	34,058	44,696,526	58.59	1,655	2,466,428	66.52	32,403
1909	41,950	79,264,817	84.35	2,161	4,233,921	87.46	39,789
1910	40,241	98,007,295	108.73	2,749	8,134,064	132.07	37,494
1911	36,987	74,410,550	89.81	2,523	4,977,174	88.07	34,464
1912	52,705	99,567,071	84.34	2,456	4,692,262	85.31	50,249
1913	51,732	76,820,739	66.29	1,881	3,396,429	80.62	49,851
1914	63,868	70,472,704	49.26	2,618	3,244,346	55.32	61,250
1915	98,876	111,031,144	50.13	2,082	2,357,350	50.54	96,794
1916	120,576	159,745,475	59.15	4,098	5,330,100	58.07	116,478
1917	181,089	233,220,904	57.49	4,000	5,305,289	59.21	117,089
1918	145,518	146,378,313	44.91	2,746	3,133,622	50.95	142,772
1919	239,259	215,820,113	40.27	2,282	2,205,629	43.15	236,977
1920	252,922	242,795,773	42.86	4,160	2,846,898	30.55	248,762
1921	185,394	73,772,677	17.76	5,716	2,414,924	18.86	179,678
1922	301,076	101,843,188	15.10	4,809	1,921,828	17.84	296,267
1923	309,144	185,060,304	26.72	8,772	5,672,319	28.87	300,372
1924	328,056	174,231,331	23.71	10,309	6,057,637	26.23	317,747
1925:							
Jan.	32,898	22,406,756	30.41	1,162	963,593	37.02	31,736
Feb.	24,696	18,532,115	33.50	979	779,406	35.53	23,717
Mar.	33,072	25,146,691	33.94	1,345	1,105,119	36.69	31,727
Apr.	32,506	24,874,562	34.16	1,130	1,009,305	39.86	31,376
May	36,932	30,311,754	36.64	1,203	1,323,445	49.12	35,729
June	31,569	26,855,883	37.98	1,198	1,577,106	58.75	30,371
July	32,455	33,701,723	46.36	1,278	2,132,681	74.52	31,177
Aug.	33,412	39,834,348	53.22	1,131	1,623,258	64.08	32,281
Sept.	26,367	36,686,013	62.11	1,154	1,820,360	70.41	25,213
Oct.	34,651	50,027,338	64.45	1,132	1,989,291	78.43	33,519
Nov.	37,755	56,271,963	66.54	1,605	2,898,930	80.65	36,150
Dec.	40,329	65,055,868	72.02	1,510	2,625,259	77.61	38,819
	396,642	429,705,014	48.36	14,827	19,847,753	59.76	381,815
1926:							
Jan.	42,404	72,528,151	76.36	2,084	3,747,505	80.28	40,320
Feb.	32,865	58,733,370	79.78	1,430	2,280,168	71.17	31,435
Mar.	42,152	70,589,581	74.76	1,836	2,735,234	66.51	40,316
Apr.	34,544	48,742,539	62.99	1,128	1,605,093	63.58	33,416
May	29,756	36,896,080	55.35	1,052	1,558,987	66.17	28,704
June							
July							
Aug.							
Sept.							
Oct.							
Nov.							
Dec.							

United States Tire and Tube Statistics[1]

Production, Sales, and Inventories[2]

AUTOMOBILE CASINGS

	Production During Month					Sales During Month					Inventory at End of Month				
	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926
Jan.	2,740	4,170	4,294	4,740	4,721	2,194	4,114	3,785	4,013	2,974	5,566	6,261	6,411	7,949	9,947
Feb.	2,779	4,291	4,372	4,908	4,865	2,144	3,568	3,849	3,924	3,436	6,255	6,966	7,020	8,928	11,164
Mar.	3,528	5,154	4,570	5,276	5,456	2,847	4,570	3,988	4,657	4,561	6,911	7,561	7,684	9,510	12,004
Apr.	3,202	4,719	4,410	5,341	5,346	2,853	4,106	4,018	5,498	4,980	7,286	8,118	8,219	9,088	12,461
May	3,629	4,880	4,051	5,467		3,608	3,793	3,693	5,954		7,364	9,209	8,442	8,611	
June	3,785	3,943	3,506	5,418		4,281	3,443	3,671	6,737		6,723	9,387	8,207	7,243	
July	3,302	2,657	3,403	5,587		3,678	3,463	4,748	6,298		6,445	8,628	6,851	6,421	
Aug.	3,874	3,141	4,313	5,607		4,153	3,803	5,010	4,760		6,173	8,078	5,969	7,261	
Sept.	3,340	2,706	4,708	5,007		3,407	3,563	4,539	4,569		6,149	7,197	6,033	7,681	
Oct.	3,566	3,148	5,169	4,505		3,534	3,821	4,196	5,580		6,244	6,502	7,118	6,670	
Nov.	3,644	3,200	4,253	4,229		3,248	3,408	4,480	3,671		6,620	6,252	6,943	6,955	
Dec.	3,543	3,250	4,584	4,760		4,040	3,547	4,143	3,601		6,132	5,772	7,427	8,142	
	40,932	45,259	51,633	60,845		39,987	45,204	50,120	59,262						

AUTOMOBILE INNER TUBES

	Production During Month					Sales During Month					Inventory at End of Month				
	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926
Jan.	3,125	5,269	5,184	6,343	6,809	2,552	5,091	4,723	5,576	3,723	6,996	7,784	8,960	11,570	14,361
Feb.	3,462	5,386	5,424	6,339	6,825	2,310	4,085	4,530	4,971	3,736	8,189	9,029	9,786	13,023	17,090
Mar.	4,023	6,501	5,625	7,000	7,030	2,848	5,214	4,667	5,711	4,987	9,321	10,321	10,877	14,236	19,131
Apr.	3,534	5,679	5,380	6,851	6,554	3,162	4,825	4,782	6,704	5,051	9,640	11,192	11,503	13,618	20,674
May	3,961	5,757	4,992	6,846		3,995	4,651	4,865	8,040		9,586	12,390	11,682	12,501	
June	4,174	4,787	4,658	6,942		5,391	4,882	5,286	9,032		8,249	11,899	10,888	10,409	
July	4,091	3,500	5,143	7,544		4,905	5,374	7,190	9,140		7,568	9,862	8,845	8,635	
Aug.	5,078	4,771	6,688	7,618		5,733	5,800	7,493	6,923		6,943	9,267	7,678	9,271	
Sept.	4,669	4,339	7,342	7,254		4,797	4,966	6,908	6,665		6,886	8,610	8,052	9,950	
Oct.	5,050	5,140	7,861	6,612		4,618	4,848	5,700	7,845		7,317	9,198	9,803	8,726	
Nov.	5,135	4,602	6,136	6,266		4,165	4,604	6,332	5,406		8,280	8,925	10,224	9,491	
Dec.	4,548	4,385	6,273	6,999		5,197	4,732	5,540	4,991		7,643	8,425	11,052	11,313	
	50,850	60,116	70,706	82,614		49,673	59,072	68,016	81,004						

(1) *Statistics of The Rubber Association of America, raised to 100%.* (2) *All figures expressed in thousands.*

Stock of Crude Rubber in United States and London

(All Quantities in Long Tons)

UNITED STATES

At End of	ON HAND			AFLOAT			ON HAND AND AFLOAT		
	1924	1925	1926	1924	1925	1926	1924	1925	1926
Jan.	——	60,870	55,198	——	36,759	46,296	——	97,629	100,434
Feb.	——	54,109	58,035	——	41,475	46,935	——	95,584	104,970
Mar.	——	52,494	61,822	——	40,577	43,567	——	93,071	105,389
Apr.	——	50,143	55,261	——	53,465	41,905	——	103,608	97,166
May	——	52,064	64,360	——	46,846	40,303	——	98,910	104,663
June	——	50,997		——	51,202		——	102,199	
July	——	46,245		——	46,003		——	92,248	
Aug.	——	42,354		——	41,254		——	83,608	
Sept.	——	36,367		——	55,151		——	91,518	
Oct.	55,378	34,085		46,359	51,098		101,737	85,183	
Nov.	59,017	34,885		35,685	42,692		94,702	86,577	
Dec.	56,080	51,215		46,216	48,208		102,296	99,423	

(Rubber Association of America figures raised to 100%.)

LONDON

(In Wharves and Warehouses—Figures Include Latex)

At End of:	1920	1921	1922	1923	1924	1925	1926
January	19,300	56,573	67,252	73,498	57,460	27,172	9,994
February	18,329	59,439	67,623	70,483	56,732	23,425	10,004
March	18,969	63,913	66,670	63,438	55,647	18,104	13,750
April	20,072	68,759	68,637	58,770	54,559	12,949	18,951
May	20,921	70,403	70,146	54,439	51,615	5,895	20,896
June	22,517	69,408	71,597	51,050	51,115	5,318	
July	25,346	71,065	71,515	49,937	52,073	4,258	
August	30,674	73,211	72,112	48,427	49,700	4,619	
September	35,504	72,175	70,977	54,523	44,011	5,453	
October	41,743	69,229	68,536	58,891	37,523	5,086	
November	45,550	70,786	68,548	60,074	33,593	3,869	
December	50,652	69,792	72,299	60,246	29,488	5,697	

United States Consumption of Gasoline

(Gallons)

MONTHS:	1918	1919	1920	1921	1922	1923	1924	1925	1926
January	144,579,291	169,240,627	236,073,140	294,750,791	282,717,148	456,967,163	500,420,689	595,413,000	720,358,000
February	147,204,377	185,900,192	248,395,214	225,195,372	262,925,732	380,093,070	402,703,876	543,640,000	650,718,000
March	219,333,317	201,004,317	256,020,539	346,164,546	380,406,778	446,460,208	467,181,088	625,053,000	779,571,000
April	265,151,411	243,440,615	297,000,463	333,290,921	385,230,994	485,716,788	607,175,026	798,305,000	831,410,000
May	313,824,603	327,610,273	378,912,692	354,263,486	499,724,405	582,535,781	672,495,321	841,787,000	988,677,000
June	306,677,723	305,960,438	427,747,291	442,924,973	506,959,446	633,504,590	682,409,140	868,350,000	
July	353,589,555	296,242,260	434,878,617	457,758,078	566,099,329	674,019,467	789,666,590	963,071,000	
August	339,435,744	376,484,274	479,741,391	505,035,827	583,687,932	692,154,000	828,057,947	931,901,000	
September	284,685,213	367,633,742	450,888,670	438,083,634	507,924,207	655,797,616	718,068,623	848,867,000	
October	299,642,892	338,429,709	384,802,246	454,995,551	490,393,454	621,172,668	751,499,199	831,774,000	
November	245,278,844	284,620,809	366,567,344	350,548,481	471,616,103	538,308,809	698,359,199	757,744,000	
December	209,863,377	238,245,230	289,673,556	313,015,596	434,399,514	518,305,120	657,967,000	759,699,000	
TOTAL	3,129,266,347	3,434,812,486	4,250,696,163	4,516,027,256	5,372,085,042	6,685,035,280	7,770,238,000	9,365,604,000	

Exports of Crude Rubber from Principal Producing Countries

(Figures in Long Tons)

	British Malaya[1]								Dutch East Indies[2]			French[3]		
	Gross Exports	*Imports*	*Net Exports*	*Ceylon*[2]	*India & Burma*[3]	*Sarawak*[4]	*Br. North Borneo*[4]	*Siam*[4]	*Java & Madura*	*Sumatra E. Coast*	*Other D.E.I.*	*Indo-China*	*Amazon Valley*[6]	*Total*[7]
1923	252,016	70,432	181,584	37,112	6,416	5,433	1,744	1,718	32,938	44,002	57,822	5,606	19,859	394,263
1924	259,760	107,419	152,341	37,351	7,697	6,485	1,892	2,962	42,446	52,499	80,347	6,688	23,164	413,872
1925	316,825	158,022	158,803	45,684	10,082	8,460	2,308	5,378	46,643	62,678	119,271		25,307	
1925:														
Jan.	19,183	10,132	9,051	3,065	1,090	605	180	404	3,053	5,097	5,858	701	1,712	30,816
Feb.	21,622	10,071	11,551	2,207	1,121	469	148	283	3,490	5,139	8,569	586	2,977	36,540
Mar.	26,836	13,399	13,437	4,201	984	756	209	437	4,583	5,499	10,807	487	2,459	43,859
Apr.	22,414	11,751	10,663	3,250	684	483	164	384	4,121	4,663	8,536	482	1,585	35,015
May	26,667	12,979	13,688	2,600	585	717	189	489	3,624	4,455	12,006	599	2,588	41,540
June	27,894	14,706	13,188	3,502	831	1,046	195	430	4,187	4,667	10,644	833	1,653	41,176
July	24,809	16,192	8,617	4,487	680	955	218	533	4,719	5,244	10,516	411	1,142	37,522
Aug.	27,753	12,025	15,728	3,409	671	548	194	436	3,210	5,186	9,445	484	1,810	41,121
Sept.	29,425	12,913	16,512	4,758	745	766	218	553	3,364	4,913	10,628	764	2,140	45,341
Oct.	28,711	14,986	13,725	5,270	516	639	199	708	3,516	5,511	11,767	683	2,240	44,774
Nov.	31,648	14,904	16,744	3,980	1,044	838	186	411	4,657	6,349	11,958	991	2,620	49,778
Dec.	29,863	13,964	15,899	4,955	1,131	638	208	330	4,119	5,955	8,537	860	2,381	45,013
	316,825	158,022	158,803	45,684	10,082	8,460	2,308	5,378	46,643	62,678	119,271	7,881	25,307	492,495
1926:														
Jan.	30,452	10,237	20,433	4,058	1,273	416	196	288	4,398	4,965			1,284	
Feb.	30,440	8,306	22,134	4,941	725	488	141	253	4,445	4,475			2,759	
Mar.	35,012	14,800	20,212	5,704					4,855				2,126	
Apr.	23,727	10,565	13,162	3,484										
May	31,231	10,604	20,627											
June														
July														
Aug.														
Sept.														
Oct.														
Nov.														
Dec.														

(1) Malayan net exports cannot be taken as Malayan production since much of the imported rubber contains a high percentge of moisture and impurities which are eliminated before it is re-exported; the Malayan figures do not contain rubber exported as latex which on the basis of 3 pounds per gallon amounted to 99 tons in 1923, 957 tons in 1924 and 3,101 tons in 1925. (2) Ceylon Chamber of Commerce statistics until 1926. (3) Official statistics. (4) Figures for Sarawak, British North Borneo and Siam are imports from these territories into Singapore through which port practically their entire production moves. (5) Exports from "Other Dutch East Indies" are chiefly native rubber containing a high percentage of moisture and impurities for which no allowance has been made in the statistics; rubber shipped as latex has not been included and amounted to 6,355 tons in 1923, 2,735 tons in 1924 and 6,207 tons in 11 months of 1925. (6) Exports through Para, Manaos and Iquitos. (7) This total includes the net exports from British Malaya and all the figures shown for the other territories.

Net Imports of Crude Rubber into Principal Manufacturing Countries

(Long Tons)

	UNITED STATES	UNITED KINGDOM	FRANCE (abd)	GERMANY	CANADA (ac)	JAPAN (ac)	ITALY	RUSSIA (ce)	AUSTRALIA (cf)	BELGIUM (d)	NETHERLANDS	SWEDEN (abcd)	NORWAY (abc)	DENMARK (abd)
1919	236,977	42,671	19,951	5,584	8,770	10,688	9,894	75	733	3,995	2,771	2,022	437	673
1920	248,762	56,844	15,868	11,890	11,912	6,015	6,123	62	1,040	3,840	5,510	1,567	241	479
1921	179,678	42,087	16,981	21,920	8,248	22,981	3,906	165	554	1,705	1,022	813	178	251
1922	296,267	11,724	27,644	27,546	9,366	16,449	6,430	2,453	2,649	172	−3,807	1,248	321	87
1923	300,372	12,700	31,067	18,519	13,299	17,181	8,489	4,506	1,631	2,184	792	1,391	448	354
1924	317,747	−11,550	34,488	22,727	14,420	19,612	8,764	824	3,127	2,688	−807	1,781	669	473
1925	381,815	4,061	36,911	33,937	19,825	12,743	11,412	7,088	4,217	2,930	875	1,690	701	440
1925:														
January	31,736	−284	2,147	4,303	1,432	797	552	333	192	331	109	164	64	16
February	23,717	−2,492	3,529	3,690	1,278	658	908	1,000	338	275	88	136	145	37
March	31,727	−3,396	3,924	2,784	2,349	689	1,463	1,083	357	373	56	183	77	71
April	31,376	−2,961	3,069	3,574	1,397	719	817	535	314	97	181	149	47	22
May	35,729	−8,650	3,223	3,834	1,532	863	1,060	1,999	385	228	47	126	47	16
June	30,371	619	2,387	3,239	1,681	2,095	1,506	59	378	329	120	97	43	74
July	31,177	2,204	1,827	2,606	1,613	813	650	16	341	176	28	114	45	24
August	32,281	3,825	1,109	2,942	1,582	786	631	85	297	169	76	119	53	35
September	25,213	5,369	4,633	2,667	1,202	936	939	234	429	283	136	102	54	20
October	33,519	1,203	3,039	2,325	1,799	1,060	914	21	243	255	60	159	38	38
November	36,150	2,466	4,654	1,260	1,712	2,140	1,157	190	512	236	−12	219	55	52
December	38,819	6,158	3,370	713	2,248	1,187	815	1,533	431	178	−14	122	33	35
1926:														
January	40,320	6,439	3,170	703	2,188		760	332	358	76	154	123	46	51
February	31,435	3,114	3,513	1,113	1,685		1,041	643	432		89	171	82	94
March	40,316	8,907	4,790	1,342	2,079			832			227	213	31	55
Apr.	33,416	8,275						402			93	204		
May														
June														
July														
Aug.														
Sept.														
Oct.														
Nov.														
Dec.														

a—Including gutta percha. b—Including balata. c—Reexports not deducted. d—Believed to include scrap and reclaimed rubber. e—Russian statistics are exports from United Kingdom only to Russia. f—Australian annual statistics including 1924 are exports to Australia from Malaya, Ceylon, Dutch East Indies and United Kingdom; monthly figures and total for 1925 are exports from Malaya, Ceylon, and Java only. –Minus sign, reexports in excess of imports. *All statistics from original official trade returns.*

Daily Spot Closing Prices of Ribbed Smoked Sheet Rubber—*New York Market, in Cents per Pound*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Average
1924																																
Jan.	25⅝	26¼	26⅜	26⅜	26⅜	25¼	26⅜	26½	26⅜	26¼	26⅜	26⅜	—	25⅝	26¼	26⅜	26⅜	25⅝	25⅝	25½	25¼	25¼	25½	24⅞	25⅝	25½	—	25⅝	25¼	—	25⅛	25⅝
Feb.	25⅝	25⅝	25⅝	25⅝	25⅝	25⅝	25⅝	25⅝	25⅝	—	25⅝	—	25½	25⅝	25⅝	25⅝	—	25⅝	25⅝	25⅝	25¼	—	—	—	—	—	—	25¼	—	—	—	25¼
Mar.	25⅛	—	24⅜	24	24¼	24½	24¼	24½	23¾	23¾	23¾	23¾	22⅞	23⅜	23¾	22¾	22	22	21¾	21¾	21¾	21¾	21¾	21¾	21¾	21¾	21¾	21¾	22	22	22	22⅜
Apr.	22⅛	22⅝	22⅝	22	22⅛	21⅝	22⅝	22⅜	22¼	22¼	22¼	22¼	—	23⅛	22¾	22⅛	22¼	22	22⅛	22⅛	22⅜	22⅜	23⅛	23	23⅛	23⅛	23⅛	23⅛	22⅞	22⅞	22⅞	22½
May	22⅜	21⅞	19⅛	19⅝	19⅝	21⅝	21⅛	21	21	21½	—	20⅜	20⅜	20	20	19	18	18	17⅞	18	18⅛	18⅜	18⅜	19⅛	18⅜	18⅜	18⅜	18⅜	18¾	18¾	18¾	19⅛
June	—	18⅜	19⅛	—	—	19⅜	19⅜	19⅜	19⅜	19½	19⅛	19	20⅜	19⅞	19⅞	18⅜	18⅛	18⅛	18⅛	18⅛	18⅜	18⅜	18⅜	18⅛	18⅜	18⅜	18⅜	18⅜	18⅜	18⅜	18⅜	18⅜
July	18⅜	19⅛	19⅛	—	—	—	19⅜	19⅜	19⅜	19⅜	20⅛	20⅛	20⅜	20⅜	20	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜	19⅜
Aug.	23⅜	23⅜	—	24	25	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛	25⅛
Sept.	—	26⅜	26½	26¾	26⅝	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	25⅞	26¼	26¼	26¼	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜	26⅜
Oct.	26⅞	29½	29½	—	34⅞	34¼	34⅜	—	29½	30	31	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾	34¾
Nov.	34⅝	—	34⅜	—	—	—	—	34½	34¼	34¼	34¾	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½	37½
Dec.	35½	35⅝	36	36⅜	36⅞	37⅜	—	38	37⅝	37⅝	37½	37½	37⅜	—	37⅝	37½	37⅝	38	38⅜	38¾	—	39⅜	38⅞	38⅞	38⅞	38⅞	38⅞	38⅞	39⅜	40⅛	40½	37⅞
1925																																
Jan.	—	39⅞	39⅜	—	39	39	39¼	38⅛	38⅛	38⅞	—	37⅜	36½	36⅜	35⅝	35⅝	35⅝	35⅝	34⅞	34⅜	35	35½	36¼	36¼	35⅝	35⅝	35⅝	35⅝	35⅝	35⅝	36⅜	36⅜
Feb.	—	35⅜	34⅜	34¼	34½	34½	35⅜	35⅜	35⅜	34⅜	34⅜	—	35⅜	36⅜	36⅜	36⅜	36⅜	36⅜	36⅜	36⅜	—	—	—	37⅛	37⅛	37⅛	37⅛	37⅛	38⅜	—	—	36
Mar.	—	38⅜	38⅜	38⅜	38⅜	39⅜	39⅜	39⅜	39⅜	40⅜	40⅜	39⅜	40⅜	40⅛	40⅛	40½	40½	40½	41	41¼	41¼	41¼	—	42½	42½	43⅜	43⅜	43⅜	43½	44¼	42¾	41
Apr.	41¼	41⅞	41¼	41⅜	—	42⅛	42⅛	42⅛	43⅜	43⅜	44⅛	44⅜	44⅛	44⅜	44⅜	44⅛	44	44	44	44	44½	44½	—	43⅜	43⅜	44½	44⅜	44⅜	45⅜	44⅜	—	43⅜
May	45	45⅞	24	47¼	46⅞	48⅜	50⅛	52½	55⅞	—	—	59	59¼	60⅜	60⅜	64½	71⅜	72⅝	73⅜	75½	76¼	61⅜	60⅝	61⅞	65	63	63¼	65⅞	69½	45⅜	—	—	58½
June	69½	72	74⅜	76½	75⅜	75⅜	90⅛	74⅜	73⅜	74	75¼	76⅜	74⅜	105⅜	110	71⅜	72⅝	116¼	118⅜	121	117⅜	119	117¾	112¼	112¼	85⅞	82⅝	87	85⅞	87¾	—	77¼
July	81⅜	81⅞	85⅜	—	88⅜	86⅜	81⅜	79	94⅞	71⅞	72½	76½	81½	80¾	77⅝	—	78¼	80½	82½	82½	82½	82½	93½	90	89¾	89¾	89¾	89¾	91½	99¼	100¼	88⅞
Aug.	94½	—	95⅜	88⅜	85⅜	86⅜	97½	78¾	80⅞	83	86½	92	92½	93¾	93½	94¼	92¾	92	94¼	99	101⅛	102	99¼	99¼	99¼	98	99¼	99¾	101½	107	104¾	103⅛
Sept.	88¼	87¼	85	81¾	81⅛	97	97½	99	99¼	101	—	97¾	97	95¼	97	99¼	99	107	109	109¾	110¾	110½	110½	109	106¼	98	108¼	108¾	—	91½	99¼	100¼
Oct.	91¼	91¼	92	—	94½	100⅛	—	—	98½	99½	100¼	101¾	104½	105½	—	101	99¼	106	107	88¼	86¾	—	88¾	88¾	—	—	—	93	91¼	91¼	91¼	98
Nov.	—	99¾	—	98⅜	98¼	100	—	109	109¼	106	105½	105½	—	101	—	99¼	90¼	93	86¾	—	88¾	88¾	90¼	88¾	88¾	—	—	—	—	—	—	—
Dec.	106¾	108½	107¾	107¾	108¾	—	108	109	109¼	106	105½	105½	—	101	—	99¼	90¼	93	86¾	—	88¾	88¾	90¼	88¾	88¾	—	—	—	93	91¼	91¼	96½
1926																																
Jan.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feb.	67	67½	66¼	87	87¼	85½	86⅜	87⅜	87⅜	—	88⅛	88¾	88¾	85⅜	84⅛	82½	82½	75½	75½	75½	75	72	72½	—	68	66½	67	69¾	70¾	69	—	79½
Mar.	55	58	53	68	69	69	—	69	67	65	66	66	65½	—	63	60½	60½	60	59	60	—	61½	56	55	52	51¼	51	—	59½	58½	58	62¼
Apr.	59	—	59	58	56½	56½	56½	56	53	53	—	51¼	50½	49¼	48½	48½	47	47	47	48	48	49	48	48	48	48	48	49	48½	—	51¼
May	48¼	—	50	49¾	49¾	49¾	49¾	49½	49	49	49½	49	48½	47¾	47½	47½	47	43	43	43	44	46	47½	46¾	46	45	45	42	42	42	—	47¾
June	41½	42	41½	42	41½	—	41½	42	43	41¾	42	43	—	42	43½	43	43	43	43	43	44	44	43½	43½	43	45	45	42	42	42	—	42½
July	42	42																														
Aug.																																
Sept.																																
Oct.																																
Nov.																																
Dec.																																

Automobile Production

	Passenger Cars			Trucks		
	Total	United States	Canada	Total	United States	Canada
1920	1,883,158	1,799,522	83,636	322,039	311,531	10,508
1921	1,514,000	1,452,902	61,098	147,550	142,402	5,148
1922	2,397,827	2,302,923	94,904	251,434	244,285	7,149
1923	3,719,164	3,589,936	129,228	378,288	361,078	17,210
1924						
January	293,824	283,983	9,841	30,785	29,038	1,747
February	343,460	331,388	12,072	32,974	31,295	1,679
March	357,045	341,851	15,194	36,505	34,466	2,040
April	346,405	331,957	14,448	38,037	36,104	1,933
May	286,324	271,033	15,291	35,408	33,655	1,753
June	225,079	214,322	10,757	29,135	28,185	950
July	244,544	235,925	8,619	26,448	25,341	1,107
August	255,232	249,796	5,436	28,714	27,834	880
September	263,528	256,940	6,588	32,015	30,663	1,351
October	260,881	254,524	6,357	32,533	31,263	1,270
November	204,343	198,381	5,962	27,956	26,875	1,081
December	182,099	174,899	7,200	27,596	25,906	1,690
Total	3,262,764	3,144,999	117,765	378,106	360,625	17,481
1925						
January	212,921	204,620	8,301	28,198	26,633	1,565
February	252,803	242,024	10,779	34,467	32,774	1,693
March	332,154	319,140	13,014	45,168	43,079	2,089
April	391,302	375,787	15,515	47,898	46,322	1,576
May	382,714	364,363	18,351	43,380	41,492	1,888
June	364,806	350,557	14,249	38,141	36,347	1,794
July	358,554	347,414	11,140	41,915	40,070	1,845
August	221,831	214,401	7,430	37,843	36,357	1,486
September	272,425	262,053	10,372	60,452	57,972	2,480
October	406,572	392,651	13,921	46,003	44,309	1,694
November	336,358	327,617	8,741	40,077	37,840	2,237
December	285,199	277,701	7,498	34,477	32,746	1,731
Total	3,817,639	3,678,328	139,311	498,019	475,941	22,078
1926						
January	283,263	272,011	11,252	32,637	29,659	2,978
February	334,529	318,634	15,895	40,816	37,533	3,283
March	398,042	379,769	18,273	51,635	47,788	3,847
April	402,574	382,631	19,943	53,268	50,272	2,996
May	394,781	371,595	23,186	51,374	48,082	3,292
June						
July						
August						
September						
October						
November						
December						

U. S. Consumption of Crude Rubber

(Rubber Association of America statistics raised to 100 per cent—All figures in long tons)

	1921	1922	1923	1924	1925	1926
January	5,045	16,938	30,106	29,058	29,638	32,196
February	5,955	14,767	30,149	25,736	29,761	31,136
March	9,190	21,408	36,629	28,385	33,498	32,936
April	13,084	19,294	29,085	27,129	34,139	32,696
May	16,023	23,246	36,155	25,845	35,322	29,364
June	16,142	31,713	24,272	22,753	35,822	
July	18,310	24,522	17,685	23,396	36,053	
August	23,649	29,361	20,359	28,962	35,909	
September	16,705	24,410	17,594	31,497	31,691	
October	16,814	26,881	21,321	31,520	29,047	
November	14,105	24,950	20,437	27,289	28,853	
December	15,482	25,070	21,902	27,199	28,748	
TOTALS	170,504	282,560	305,694	328,769	388,481	

Monthly statistics covering shipments of various classes of rubber goods from the United States may be secured free of charge from the Rubber Division, Bureau of Foreign & Domestic Commerce, Washington, D.C.

The Market Place

WHERE TO OBTAIN
Machinery, fabrics, chemicals, compounding ingredients, crude and reclaimed rubber, consulting chemical
1.

ACCELERATORS—X L O and Diphenyl Guanidine.
Dovan Chemical Corp.
30 Church St. New York

ACCELERATORS — Two new accelerators: Vulcone and Di-ortho-tolylguanidine.
E. I. du Pont de Nemours & Co., Inc.
Dyestuffs Dept. Sales Div.
Wilmington, Del.

ACCELERATORS
Grasselerator 102
Grasselerator 552
Grasselerator 808
Grasselli Chemical Co.
Rubber Service Dept.
347 Madison Ave., New York

ACCELERATORS— Every lot is tested before shipment and a written guarantee of quality furnished.
Roessler & Hasslacher Chem. Co.
709 Sixth Ave. N. Y. City

ACCELERATORS—A19, A7, Thiocarbanilid.
The RUBBER SERVICE Laboratories Co.
611 Peoples Savings & Trust Bldg.
Akron Ohio

ANTIMONY Pentasulphide, golden and crimson, very fine, pure.
Rare Metal Products Co.
Belleville, N. J.
Direct Factory Representation

ASBESTINE—Specially prepared for use in Rubber. Send for liberal working sample.
SOLE PRODUCERS
International Pulp Co.
41 Park Row, New York City

The* BLUE LIST *of the Industry

Your Products Listed Here

reach buyers in rubber factories at a cost lower than is possible by any other method.

ARRANGE FOR YOUR LISTING TODAY!

BEAD CABLES— National Flat Woven and Pratt Patent Bead Cables.
National Standard Co.
Niles, Mich.

BOLTON BIAS CUTTER
Cuts cord or flat woven fabrics with equal ease and precision. In use all over the world.
Spadone Machine Co., Inc.
15 Park Row New York

CALENDERS—Embossing, for artificial leather, oil cloth etc.
Textile-Finishing Machinery Co.
83 Exchange Place, Providence, R. I.

CARBON BLACK—*Micronex* the world's standard gas black, universally known as the "King of Rubber Pigments."
Binney & Smith Co.
41 East 42nd St. New York City

CARBON BLACK
Godfrey L. Cabot, Inc.
Manufacturers for forty years.
940 Old South Bldg., Boston, Mass.
612 Metropolitan Bldg., Akron, O.

CARBON BLACK—*Aerfloted* Arrow Black for rubber compounding. Standard for grit-free uniformity.
J. M. Huber, Inc.
130 West 42nd St. New York

CARBON BLACK — *Black Goose Brand*—free from grit and impurities and imparts high tensile strength to the rubber compound.
Union Power Co., Inc.
310 United Bldg., Akron, Ohio. 607 Com'l. Nat'l. Bank Bldg., Shreveport, La. 25 West 43rd St., New York, N. Y.

CARBON BLACK or any other compounding material used by rubber manufacturers can be marketed at low cost by listing it in *The Market Place.*

CASES—Fibre construction, insure satisfactory shipping results. Send for sample.
Brooklyn Fibre Syndicate, Inc.
Decatur St. & Irving Ave.
Brooklyn, N. Y.

CATALPO — The universal and standard rubber pigment now being used in treads, solids, tubes, carcass frictions, etc.
Moore & Munger
33 Rector Street
New York City

CHEMISTS read your listing in the MARKET PLACE. There is no cheaper way to reach these prospects.
Try It!

THE MARKET PLACE Section Continued on Second Page Following.

MARKETS

Cottons and Fabrics

NEW YORK, July 2, 1926

The Government's crop report proved to have been closely foreshadowed by the average of the sixteen private forecasts issued by local and Southern trade authorities and crop statisticians. It therefore had no further important bearish effect on the market, as no great pressure of either liquidation or Southern selling followed its appearance.

Prices had shown a decline of 13 points on July from the closing of yesterday by the time trading had ceased at five minutes before the report appeared at 1:30 o'clock, and 5 to 10 on the new crop months. July then sold at 17.78, October 16.33, December 16.25, January 16.07 and March 16.29.

The Government's June 25th condition of 75.4 per cent for the crop compares with 75.9 a year ago, while its estimated acreage of 48,898,000 acres as against 48,090,000 last year, thereby making a new high record on the area under cultivation.

The indicated yield at preesnt of 15,535,000 bales compares with 16,085,000 produced the past year without linters, and about 16,000,000 the previous record crop raised in the season of 1914 just on the outbreak of the World War.

For the past two weeks the trade has been undergoing a general readjustment of commitments in the market in anticipation of just such a bearish crop report as today's. Therefore it was considered to a large extent discounted.

The new crop is just now entering on the two most critical months of the season in the stage of its progress and development.

While the new crop months were more or less sustained by the process of liquidating, it was feared that there would be frequent showers in the western and central sections of the belt. Toward the last of the week many reports of depredations by the hopper, or cotton flea, in Louisiana, Mississippi, Georgia and Texas also stiffened those positions. There were also reports of a rapid increase in the number of weevils.

Aside from the reports of the spread of insect pests, most of the advices continue to give excellent accounts of the progress of the crop. It is admitted that the crop is late and has not so far given evidence of blooming quite as generally as it should, but the plants are nevertheless reported to be vigorous and the fields generally well cultivated

Today's closing prices follow:

	Highest	Lowest	Today's Close	June 11
July	17.93	17.54	17.67	17.53
October	16.34	16.04	16.19	16.26
December	16.33	16.02	16.15	16.32
January	16.20	15.90	15.08	16.25
March	16.41	16.09	16.28	16.40

Tire Fabrics

Tire fabric mills have continued production at a satisfactory level on old orders but future activity is dependent on increased production of tire manufacturers. Within the last few days some manufacturers have come into the market for small quantities of fabrics. The increasing use of off color cotton in the manufacture of tires has had an unsettling effect on the market. Several plants are making the off-grade qualities to meet the demand of distributors who are looking for a price proposition. Prices have been irregular with some slight shading and are merely nominal in character. Quotations follow:

CORD

Combed Peeler	lb.	.48 @	.50
Carded Peeler		.45 @	.47
Combed Egyptian uppers	lb.	.58 @	60
Carded Egyptian uppers	lb.	.48 @	.50

SQUARE WOVEN

17¼-ounce Egyptian uppers, combed	lb.	.60 @	—
17¼-ounce Egyptian uppers, carded	lb.	.48 @	.50
17¼-ounce Sakellarides, combed	lb.	.63 @	—
17¼-ounce Peeler, carded	lb.	.42 @	.44

Sheetings and Ducks

SHEETINGS—Interest in sheetings continued at a low point during the past two weeks with an accompanying easing of prices. 40-inch 2.85 yd. dropped to 11⅛c with some contract sales possible at 11c.

DUCKS—Some cotton duck mills report moderate business in small orders for immediate delivery but the industry in general is suffering from the curtailed production of its consumers. Prices have been irregular with a downward trend. Quotations follow:

SHEETINGS

40-inch 2.50-yard	yd.	.12½ @	.12¾
40-inch 2.85-yard	yd.	.11 @	—
40-inch 3.15-yard	yd.	.12¼ @	—
40-inch 3.60-yard	yd.	.09¾ @	—
40-inch 3.75-yard	yd.	.08½ @	—
40-inch 4.25-yard	yd.	.07½ @	.07¾

DUCKS

Belting and Hose	lb.	.33 @	.34½
Enameling	lb.	.34 @	.39
Shoe Ducks	lb.	.39 @	.40
Single filling	lb.	.14 @	.16½
Double filling	lb.	.17½ @	.18½

J. H. LANE & CO.

Tire Fabrics Cord Fabrics

Enameling Duck Drill Sheeting

Osnaburg and Special Constructions

250 W. 57 Street, NEW YORK 323 South Franklin St., CHICAGO

ALL THE LEADERS

Are represented in this section. Purchasing agents can rely on the concerns listed as thoroughly reliable in every way.

The Market Place 2.

Great Oaks From Little Acorns Grow

—and likewise a small beginning in the matter of advertising space is the first step to a bigger business!

Start Now by using listings in

THE MARKET PLACE

Rates are low— and results are sure.

CRUDE RUBBER — All Grades. Washed - Dried - Milled.
Send us Your Inquiries.
Gibraltar Rubber Corp.
West New York, N. J.

ENGINEERS
Machinists, Iron and Steel Founders
Standard and Special
Rubber Working Machinery
The Adamson Machine Co.
Akron, Ohio

CRUDE RUBBER
BROKERS
Henderson Brothers Co., Inc.
60 Beaver St., New York City
Members Rubber Exchange of N. Y.

Over 30 chemical firms are using *The Market Place* regularly. The cost is moderate and results sure!
The Rubber Age
225 Fourth Ave., New York

CRUDE RUBBER
Importers and Dealers
Members Rubber Exchange of N. Y. and Rubber Exchange Clearing House
Henderson, Helm & Co., Inc.
44 Beaver St., New York
Weekly Market Review on Request

FABRICS—Spots and Contracts: Tire Fabrics, Enameling ducks, Tube Wrapping Tapes.
H. Frank Jones
395 Broadway New York City

CHEMICALS — Accelerators
Trimene Base, Heptene, Monex, Crylene, Lithex, Thiocarbanilide, Aniline Oil.
Clay—Mineral Flour, Seminole (Georgia).
Antioxidant—VGB, a proven product.
Labels—all-rubber two color brands.
Naugatuck Chemical Co.
1790 Broadway, New York.

CRUDE RUBBER
We Solicit Your Inquiries
H. Muehlstein & Co., Inc.
41 East 42nd. St., N. Y. City
Offices in Akron, Chicago, Boston.

FABRICS—Tire, cords, enameling ducks, drills, sheetings, osnaburgs.
J. H. Lane & Co.
250 West 57th St. New York City

CHEMICALS and compounding ingredients; Clay, Whiting, Accelerators, Mineral Rubber.
R. T. Vanderbilt Co.
50 East 42nd St. New York City

CRUDE RUBBER
Importers
Members Rubber Exchange of N. Y., Inc. and Rubber Exchange Clearing House, Inc.
Charles T. Wilson Co., Inc.
82 Beaver St., New York
AKRON OFFICE: 507 Second Nat'l. B'ldg.

FABRICS—Tire fabrics—coarse builders, chafers, breakers in all grades.
New England Southern Mills
LAWRENCE & CO.
24 Thomas St. New York
Boston, Philadelphia, Chicago, St. Louis, San Francisco

CHEMICALS and pigments for the rubber trade. Complete stocks.
Wishnick-Tumpeer Chemical Co.
CHICAGO CLEVELAND NEW YORK

DIPHENYLGUANIDINE
Aero Brand, product of the highest purity from dependable source of supply.
American Cyanamid Co.
511 Fifth Ave. New York City.

FACTICE—Prevents blooming, makes colors fast and a smoother batch.
Stamford Rubber Supply Co.
Stamford, Conn.

CONSULT BANNER
Before You Buy
TIRE BUILDING MACHINES
The Banner Machine Co.
Columbiana, Ohio
Paul A. Frank, Akron, Ohio, Agent.

DRY KILN—for drying crude rubber and chemicals—Hunter Process.
Carrier Engineering Corporation
750 Frelinghuysen Ave. Newark, N. J.

FLUXITE — Liquid and Solid — A rubber softener and aging compound of great efficiency.
Damascus Mnfg. Corp.
E. 93rd. St. & Cassius Ave.,
CLEVELAND, OHIO

THE MARKET PLACE Section Continued on Second Page Following.

RUBBER MARKETS

Scrap Rubber

NEW YORK, July 2, 1926

Due to a scarcity of spot stocks of rubber scrap, dealers have been buying up whatever lots were available with the result that all grades are quoted considerably above prices of our last report. Quotations follow:

Auto tire peelings			.01¾ @	.02
Standard White auto	ton	44.50	@	50.00
Mixed auto	ton	28.00	@	30.00
Bicycle tires	ton	20.00	@	22.00
Clean solid truck tires	ton	38.00	@	40.00
Boots and shoes			.01¼ @	.01⅜
Arctics, untrimmed			.01¼ @	.01⅜
Arctics, trimmed			.01½ @	.01⅝
Inner tubes, No. 1			.09 @	.09¼
Inner tubes, No. 2, compounded			.07 @	.07¼
Air Brake Hose	ton	24.00	@	26.00
Rubber hose	ton	18.00	@	20.00

Reclaimed Rubber

NEW YORK, July 2, 1926

Despite a slightly lessened demand from manufacturers early in June, orders for reclaims increased late in the month with the result that reclaimers are again busy keeping up with demands. With the increased production schedules expected during July on the part of tire plants, reclaimers look for present conditions to continue for some time. Prices follow:

Friction (Uncured)

No. 1	lb.	.32	@	.35
No. 2	lb.	.25	@	.27

High Tensile Black

Super-Reclaim No. 1	lb.	.24	@	.25
" " No. 2	lb.	.18	@	.19

Shoe

Unwashed	lb.	.09¾	@	.10
Washed	lb.	.12½	@	.12¾

Tube

No. 1 (Floating)	lb.	.22	@	.23
No 2 (Ccmpounded)	lb.	.17	@	.18

Tires

Black, unwashed	lb.	.10½	@	.10½
Black, washed	lb.	.11½	@	.11¾
Black, selected tires	lb.	.11¾	@	.12
Dark Gray	lb.	.14½	@	.14⅝
Light Gray	lb.	.16½	@	.16¾
White	lb.	.18½	@	.19
Truck, Heavy Gravity	lb.	.10	@	.10½
" Light Gravity	lb.	.10½	@	.11

Miscellaneous

Mechanical Blends	lb.	.06	@	.09
Red, High Grade	lb.	.17½	@	.18

Crude Rubber

NEW YORK, July 2, 1926

More or less of a holiday spirit has prevailed in the rubber market during the past two weeks, and trading has been extremely light. While manufacturers inventories are still high, many of the larger companies have curtailed operations until after July 6th, which will hold inventories at present levels and give dealers an opportunity to work off stocks. Until consumer demand increases materially there is little likelihood of much activity in the market or a recovery of prices.

The fact that prices have remained comparatively firm when aggressive buying or selling could have easily manipulated them, would seem to point to American interest in maintaining prices at a level which would prevent further restriction on August 1. The average London price for the quarter on June 30 was 21.409 d. as compared with 21.576 a week ago and 21.693 two weeks ago.

There were some light purchases of nearby rubber on the 17th. Over 60 per cent of the trading on the exchange was in July. Spot sold at 44c. A little inquiry for off grades was reported on the outside on the 18th. Prices on the exchange opened firm, advanced during the early trading but receded 30 to 70 points at closing. Prices remained nominal on Saturday in the absence of either bids or offers. Only 86 lots changed hands.

Rubber stocks in London increased 383 tons during the week ending June 17 to a total of 22,664 tons, as against 19,023 tons a month ago and 5,424 tons a year ago.

The trading on the "old" and "new" basis inaugurated on the 21st resulted in some confusion on the exchange and acted as a sort of damper to business. Switching operations from old to new contracts continued in evidence throughout the next few days. Prices in London dropped on the 23rd and opening bids on the exchange were down 50 points, but little buying or selling interest was evident. Prices were easier on the 25th and were off about ½c per pound on the outside with little inquiry. Business was extremely light on the exchange, only 1,000 lots being sold during the entire week.

An increase of 1,136 tons was noted in London rubber stocks during the week ending June 24, bringing the warehouse total up to 23,800 tons as against 19,023 tons last month and 5,138 a year ago.

Prices were down ½c on the outside market on the 28th with spot at 42½c, but there was no sign of any important buying interest. Only 90 lots were traded on the exchange but prices held steady. This inactivity extended over the next few days with sellers ideas at 42½c to 43c per pound, but prices were purely nominal in the absence of any bidding. There is little indication of any active factory buying in the immediate future. Closing prices on the Exchange are shown in the table at the bottom of this page.

Plantations—

Ribbed Smoked Sheets

Spot	.42	@	—
July	.41	@	—
July/Sept.	.41½	@	—
Oct./Dec.	.42	@	—
First Latex, crepe spot	.42	@	—
Amber Crepe, No. 2, spot	.39	@	—
" " No. 3	.38	@	—
" " No. 4	.37½	@	—
Brown Crepe, Rolled	.34½	@	—
" " Clean, thin	.37½	@	—
" " Specky	.36½	@	—

Pontianac—

Bangermassin	Nominal		
Palembang	Nominal		
Prime Pressed	Nominal		
Sarawak	Nominal		

Paras—

Up-river Fine	.38	@	—
" Medium	.34	@	—
" Coarse	.23	@	—
Acre Bolivian, fine	.38	@	—
Tapajos, fine	.35	@	—
Islands, fine	.35	@	—
Cut Beni Bolivian, fine	.39	@	.40

Caucho Ball—

Upper, shipment	.24	@	—

Centrals—

Corinto, scrap	.22	@	—
Esmeraldo, sausage	.22	@	—
Guayule, w and d	.33	@	.34

Africans—

Benguela, No. 2	Nominal
Congo, upper, black	Nominal
" " red	Nominal
Kassai, Prime Red	Nominal

Balata—

Block, Columbia	.60	@	—
" Cuidad	.60	@	—
Surinam, sheet	.73	@	—

Gutta Percha—

Siak	.32	@	.33
Red Macassar	3.00	@	3.50

Chicle—

Mexican, Yucatan	.65	@	—

LONDON MARKET

Standard Ribbed Smoked Sheets—

Spot	20¼d
July	20¼
July/Sept.	20½
Oct./Dec.	21
Jan./March	21½

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—

Spot	19¾d
Aug./Sept.	19¾
Oct./Dec.	20⅛

Closing Prices on Rubber Exchange of New York, Inc.

JUNE 17 to JULY 5

		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	SALES*
June	17	41.60	41.50	41.50	42.00	42.10	42.10	42.60	42.50	42.50	42.50	42.50	44.40	349
	18	41.80	41.80	41.90	42.40	42.30	42.50	43.20	42.20	43.20	43.20	43.20	44.60	386
	19	41.90	41.80	42.00	42.40	42.50	42.90	43.20	43.20	43.20	43.20	43.20	44.70	87
(a)	21	42.00	42.00	42.00	42.50	42.50	43.20	43.50	43.50	43.50	43.50	43.50	....	348
	22	42.00	42.20	42.20	42.50	42.80	43.00	43.80	43.80	43.80	44.00	44.00	....	122
	23	41.10	41.00	41.00	41.40	41.80	42.00	42.50	42.50	42.50	42.50	42.50	....	175
	24	41.00	41.00	41.00	41.60	42.00	42.10	42.40	42.40	42.40	42.50	42.50	43.80	186
	25	41.00	41.00	41.00	41.60	42.00	42.40	42.70	42.70	42.70	42.70	42.70	43.80	107
	26	40.90	40.90	40.90	41.40	41.80	42.10	42.50	42.50	42.50	42.50	42.50	43.70	17
	28	41.10	41.10	41.10	41.60	41.80	42.10	42.50	42.50	42.70	42.70	42.70	....	91
	29	41.00	41.20	41.20	41.70	41.80	42.30	42.90	42.90	42.90	43.00	43.00	....	162
	30	40.80	41.00	41.10	41.60	41.80	42.10	42.50	42.50	42.50	42.50	42.50	....	82
July	1	41.00	41.00	41.30	41.80	42.00	42.50	43.00	43.00	43.00	43.00	44.00	44.00	181
	2			(Exchange Closed)										
	3			"	"									
	4			"	"									
	5			"	"									

(*) In lots of 2½ tons each; totals are for old and new contracts.
(a) Figures starting June 21 represent prices for new contracts.

The Market Place

3.

GUAYULE—"Duro" Brand washed and dried ready for compounding.

Continental Rubber Co.
120 Broadway New York

MOLDS AND CORES—Tire building equipment; general machine work.

The Akron Equipment Co.
Akron, Ohio

RECLAIMED RUBBER
of Standardized Quality.
NO. 188 FOR TUBES
Philadelphia Rubber Works Co.
New York Akron Philadelphia

LINERS — PROCESSED
For
Various Rubber Stocks
The Cleveland Liner & Mfg. Co.
5508 Maurice Ave., Cleveland, O.

MOLDS & CORES—Tire building machines; tire finishing stands; tubing machines; hydraulic presses.

The Akron Standard Mold Co.
Akron, Ohio

RECLAIMED RUBBER—for all purposes.

Rubber Regenerating Co.
Naugatuck, Conn.

MACHINERY—
Heater Presses, Molds and Cores, Tubing Machines.
The Williams Foundry & Mach. Co.
"In Business Since 1888"
Akron, Ohio

MOLDS & CORES—for automobile tires; general machine work.

Kuhlke Machine Co.
Akron, Ohio

RECLAIMED RUBBER
A standardized grade for every requirement.
U. S. Rubber Reclaiming Co., Inc.
100 E. 42nd St., New York, N. Y.
"43 Years Serving the Industry Solely as Reclaimers"

MANDRELS--CIRCULAR
and Economy Calender Shells
Prompt Service—Let us quote you.
The Clyde E. Lowe Co.
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"NU-GUM" RUBBER
Produced from No. 1 Floating Tubes. Absolutely pure — no oils —no compound added. *Specific Gravity*, .98.
E. L. Bullock & Sons, Inc.
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RECLAIMED RUBBER
The Xylos Rubber Co.
Akron, Ohio
CAPACITY 250,000 POUNDS DAILY

MICA — Water Ground and Water Floated — 160 Mesh —Absolutely Free from Grit. Akron Stocks, also Factory Shipments.

The C. P. Hall Co.
116 Central Savings & Trust Bldg., Akron

PINE TAR — Retort "Sunny South", "Pentarco", "American". Brands for Tires, Tubes, Mechanicals,—Reclaim. *The Best Softener*

E. W. Colledge
P. O. Box 356 Jacksonville, Fla.
Agents in New York, Chicago, Cleveland.

RED OXIDE—A special grinding, guaranteed uniform in color and quality.

Joseph A. McNulty
114 Liberty St. New York City

MICA—160 mesh—water ground —water floated—free from foreign matter.
Stocks carried at Trenton, N. J.—Cleveland, O.—Chicago, Ill.
The Harshaw Fuller & Goodwin Company
Hanna Building, Cleveland, Ohio

RECLAIMED RUBBER
We specialize in fine Grey, Black and Red Reclaimed Rubber.
Send us Your Inquiries
The Defiance Rubber Co.
Defiance, Ohio

RELIABLE RUBBER SUBSTITUTES
T. C. Ashley & Co.
682 Atlantic Ave. Boston, Mass.
Represented by H. N. RICHARDS CO. TRENTON, N. J.

MOLDS
FOR TIRES, MECHANICAL GOODS & DRUGGIST SUNDRIES.
The Akron Rubber Mold & Machine Co.
AKRON, OHIO.

RECLAIMED RUBBER—
Uniformity, reliability, cleanliness.

Pequanoc Rubber Co.
Butler, N. J.

RUBBER—Crude and scrap, all grades.

H. Muehlstein & Co.
Liggett Bldg. New York
Akron, Chicago, Boston, Hoboken

THE MARKET PLACE Section Continued on Second Page Following.

Accelerators
Colors
Mineral Rubber
Compounding Materials

RUBBER CHEMICAL and COMPOUNDING MATERIAL MARKETS

Softeners
Vulcanizing Ingredients
Rubber Substitutes

NEW YORK, July 2, 1926—For the greater part of the past month, dealers and manufacturers of chemicals and compounding materials have reported a lessened movement of stocks to rubber plants. This inactivity was due to lowered production on the part of tire manufacturers. In the past week however stocks have moved fast which serves to indicate a renewal of activity in the industry. Though a number of tire factories were closed over the holidays, present reports would indicate larger production schedules during July. With this in mind therefore, factories have been ordering stocks of compounding materials in liberal amounts during recent days and there is every reason to believe that this condition will hold for a number of months. Price changes have been few. Quotations follow:

ACCELERATORS

Organic

A-7	lb.	.65 @	.90
A-40	lb.	.65 @	.90
A-19	lb.	.70 @	.95
A-11	lb.	.70 @	.95
Aledhyde ammonia, crystals	lb.	.82 @	—
Aniline oil, drums	lb.	.17 @	.17½
"BB"	lb.	1.05 @	1.07
Crylene	lb.	.70 @	—
paste	lb.	.50 @	—
Di-Ortho-Tolylguanidine	lb.	1.05 @	1.08
Diphenylguanidine	lb.	.85 @	.88
Ethylidene aniline	lb.	.60 @	.65
Excellerex	lb.	.35 @	.40
Formaldehyde-Aniline	lb.	.40 @	.42
Grasselerator 102	lb.	.80 @	.82
Grasselerator 552	lb.	4.80 @	5.00
Grasselerator 808	lb.	1.25 @	1.50
Heptene	lb.	.55 @	—
Hexamethylene-tetramine	lb.	.80 @	.85
Monex	lb.	3.75 @	5.00
Paraphenylenediamine	lb.	1.25 @	1.30
Piperidine-Piperidyldithio-Carbamate	lb.	4.80 @	5.00
R & H 50	lb.	.60 @	—
Super-Sulphur No. 1	lb.	.50 @	—
Super-Sulphur No. 2	lb.	.18 @	.25
Tensilac, No. 41	lb.	.65 @	—
Thiocarbanilide, kegs	lb.	.26 @	28½
Trimene	lb.	.75 @	—
base	lb.	1.20 @	1.35
Triphenylguanidine	lb.	.70 @	.73
Tuads	lb.	4.50 @	5.00
Vulcone	lb.	.75 @	.79
Z. 88	lb.	.75 @	1.00
Zimate	lb.	5.00 @	—

Inorganic

Lead, sublimed blue	lb	.10 @	.10½
Lead, white	lb.	.10¾ @	—
Litharge, domestic	lb.	.12 @	—
Magnesia, calcined, light	lb.	.12 @	20
heavy	lb.	.04½ @	—

COLORS

Blacks (See Compounding Materials)

Blues

Prussian	lb.	.32 @	.34
Ultramarine	lb.	.08 @	.35

Browns

Sienna, Italian	lb.	.04 @	.14
Umber, Turkey	lb.	.04 @	.06

Greens

Chrome, light	lb.	.31 @	.33
medium	lb.	.32 @	.35
dark	lb.	.35 @	.40
commercial	lb.	.08 @	.11
Chromium Oxide, bbl.	lb.	.30 @	.31

Reds

Antimony crimson, 15/17	lb.	.27 @	—
sulphur free	lb.	.48 @	.50
vermillion 15/17	lb.	.37½ @	—
golden, 15/17 F.S.	lb.	.16 @	—
pentasulphide, pure,	lb.	.33 @	.35
15/17 F.S.	lb.	.26 @	.30
Indian English	lb.	.11 @	.15
Oximony	lb.	.13¼ @	—
Para toner	lb.	.80 @	.90
Red oxide, reduced	lb.	.11 @	—
pure	lb.	.12 @	.14
Blue Ridge	lb.	.12 @	.14
Toluidine toner	lb.	1.80 @	2.10
Venetian red	lb.	.01½ @	.05
Vermillion, quicksilver, English	lb.	1.40 @	1.45

Whites

Albalith	lb.	.05⅝ @	.06⅛
Lithopone, Akcolith	lb.	.05⅝ @	.06
Litnopone, Azolith	lb.	.05⅝ @	.06⅛
Zinc Oxide—American Process XX red	lb.	.07½ @	.07¾
Kadox, black label, kegs	lb.	.10⅞ @	.11⅛
blue " " "		.09⅞ @	.10⅛
red " " "		.08⅞ @	.09⅛
American Azo: ZZZ (lead free)	lb.	.07¼ @	.07¾
ZZ (under 5% leaded)	lb.	.06⅞ @	.07⅜
Zinc Oxide—French Process White seal	lb.	.12⅜ @	—
Green seal	lb.	.11⅝ @	—
Red seal	lb.	.10⅝ @	—

Yellows

Chrome	lb.	.17½ @	.18
Ocher, French medium	lb.	.03¼ @	.03⅜
domestic	lb.	.01¾ @	.02½

COMPOUNDING MATERIALS

Aluminum Flake (f.o.b. plant)	ton	21.85 @	24.50
hydrate light	lb.	.16 @	.17
Ammonia carbonate	lb.	.13½ @	.17½
Are-O Sel	ton	8.00 @	11.00
Asbestine	ton	16.00 @	18.50
Barium carbonate	lb.	.03½ @	—
Barium Dust	lb.	.05 @	.06
Barytes southern off-color,	ton	12.00 @	18.00
Western prime white	ton	23.00 @	—
imported	ton	27.00 @	36.00
Basofor	lb.	.04½ @	—
Blacks: Arrow "Aerfloted"	lb.	.08 @	.12
Bone Black	lb.	.05½ @	.11
Carbon, compressed	lb.	.08½ @	.12½
" uncompressed	lb.	.08 @	.12
Drop Black	lb.	.07½ @	.14
Lamp "	lb.	.12 @	.40
Micronex	lb.	.09 @	.13
Thermatomic carbon	lb.	.05 @	—
Blanc fixe cry f.o.b. works	lb.	.04 @	.04½
Carrara filler	lb.	.01¾ @	.02
Catalpo (fact.)	lb.	.02 @	—
Chalk	lb.	.02½ @	.04½
Clay, China, domestic	ton	15.00 @	25.00
Aerfloted Suprex	ton	13.00 @	20.00
Blue Ridge, Dark	ton	9.00 @	—
" " Light	ton	12.00 @	—
Dixie	ton	20.00 @	35.00
Langford	ton	12.00 @	22.00
Mineral Flour, c. l. fob mine	ton	17.00 @	20.00
Seminole, c. l. fob mine	ton	16.00 @	—
Glues, extra white	lb.	.20 @	.29
medium white	lb.	.18 @	.24
common bone	lb.	.12 @	.14
Graphite flake, bbls.	lb.	.06½ @	.12
Magnesia, carbonate	lb.	.07½ @	.08½
Mica, powdered	ton	90.00 @	100.
Rotten Stone (powdered)	lb.	.02½ @	.04½
Soapstone, powdered	ton	15.00 @	22.00
Starch, powdered	cwt.	3.30 @	3.70
Talc, domestic	ton	16.00 @	20.00
Terra Alba	cwt.	1.25 @	2.00
Tripoli, white	lb.	.02 @	.02¼
Whiting, commercial	cwt.	1.00 @	1.15
English cliffstone	cwt.	1.50 @	—
Quaker	ton	13.00 @	15.00
Superfine	ton	10.00 @	12.00
Sussex	ton	8.00 @	10.00
Wood pulp XXX	ton	35.00 @	—
" " X	ton	25.00 @	—

MINERAL RUBBER

Genasco (factory)	ton	50.00 @	52.00
Granulated M.R.	ton	33.00 @	38.00
Hydrocarbon, Hard	ton	29.00 @	35.00
Hydrocarbon, Soft	ton	29.00 @	—
320/340 M.P. hydrocarbon (c. l. factory)	ton	47.00 @	52.00
300/310 M.P. hydrocarbon (c. l. factory)	ton	42.00 @	47.00
Paradura	ton	70.00 @	72.50
Robertson, MR, solid	ton	35.00 @	75.00
M.R. (gran)	ton	42.00 @	80.00

SOFTENERS

Acids

Muriatic, 20%	cwt.	.95 @	1.05
Nitric, 36 degrees	cwt.	5.00 @	5.25
Sulphuric, 60 degrees	ton	10.50 @	11.50
66 degrees	ton	15..00 @	16.00
Tartaric, crystals	lb.	.29 @	—

Alkalies

Caustic soda, 76%	cwt.	3.76 @	3.91
Soda ash, 58% C.L.	cwt.	1.43 @	1.45½

Oils

Castor, No. 3 bbls.	lb.	.12¾ @	—
Corn, crude, bbls.	lb.	.11¼ @	—
refined	lb.	.13 @	—
Cottonseed, crude		.10½ @	—
Cycline	gal.	.26 @	.34
Glycerine, C.P. drums	lb.	.23½ @	.24
Linseed, Raw C.L. bbl.	lb.	.11 @	—
Liquid Rubber	lb.	.12 @	—
Moldrite	lb.	.05 @	.06
Palm, Lagos	lb.	.08½ @	.08¾
Niger	lb.	.08⅛ @	.08¼
Peanut, domestic crude	lb.	.12½ @	—
Petrolatum, white	lb.	.11⅛ @	.11⅜
amber	lb.	.03⅞ @	.04
dark amber	lb.	.03⅝ @	.03¾
Pine, steam distilled	lb.	.60 @	.65
Rapeseed, refined	gal.	.84 @	.90
blown	gal.	1.00 @	—
Rosin, first rectified	gal.	.60 @	.62
second rectified	gal.	.65 @	.67
Soya Bean, crude		.13¼ @	.13½
Synthecite	lb.	.06 @	—
Tar, commercial	gal.	.30 @	.32

Resins and Pitches

Pitch, Burgundy	lb.	.07 @	—
coal tar	gal.	.05½ @	.06
pine	bbl.	7.50 @	8.50
Rosin, grade K	bbl.	13.80 @	—
Tar Retort	bbl.	16.00 @	17.00
kiln burned	bbl.	15.00 @	16.00
Tackol	lb.	.09 @	.15

Solvents

Alcohol denatured, No. 1 bbls.	gal.	.34 @	.47
Benzol, 90%	gal.	.30 @	—
pure		.30 @	—
Carbon bisulphide	lb.	.05½ @	.06¼
tetrachloride	lb.	.07 @	.08
Motor gasoline, steel bbls.	gal.	.23 @	—
Naptha, V. M. & P.	gal.	.20 @	.22
Turpentine, spirits	gal.	.86 @	.87
wood	gal.	.80 @	.84

Waxes

Beeswax	lb.	.60 @	.62
Carnauba, No. 1	lb.	.50 @	.51
Ceresin, white	lb.	.09 @	.10
Montan, crude	lb.	.06 @	.06½
Ozokerite, black	lb.	.24 @	.25
green	lb.	.26 @	.30
Paraffine White A.M.P.	lb.	.05¼ @	.05¼
Yellow A.M.P.	lb.	.05¼ @	.05⅝

ANTI-OXIDANTS

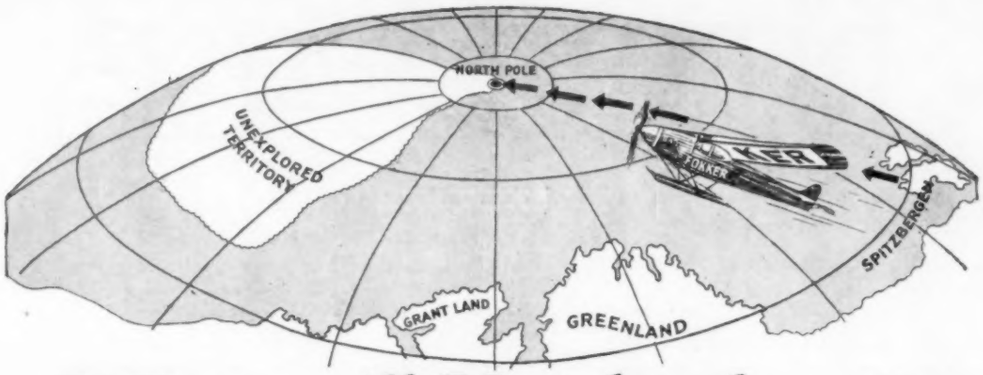
Age-Rite	lb.	.85 @	.90
Antox	lb.	.88 @	—
VGB	lb.	.70 @	—

SUBSTITUTES

Black	lb.	.08½ @	.14
White	lb.	.10 @	.17
Brown	lb.	.10 @	.15
Brown factice	lb.	.10 @	.16
White factice	lb.	.10½ @	.17½

VULCANIZING INGREDIENTS

Ethyl Chloride, Cyl.	lb.	.55 @	—
" " Drums	lb.	.45 @	—
Sulphur Chloride (drums)	lb.	.08½ @	—
Sulphur flour Superfine, bags	cwt.	2.20 @	2.75
" bbls.	cwt.	2.35 @	3.10
100% pure, refined, bags	cwt.	2.60 @	3.15
bbls.	cwt.	2.85 @	3.40



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CARBON BLACK

GODFREY L. CABOT, INC.
940 OLD SOUTH BUILDING, BOSTON.

The RUBBER AGE

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Index to Contents

NEWS SECTION

Tire Sales Show Improvement 327
Rubber Restriction Average in Balance 327
Carmi Thompson Gives Attention to Rubber 328
Financial Rubber and Motor News 329
General Motor Stock Up 330
Agreement on Golf Ball Size 331
Rim Production Below 1925 332
Towns Seeking Footwear Plant 333
Bergougnan Plant Sale Not Approved 334
World Now Has 25,000,000 Autos 335
N.T.D.A. Favors New Price Policy 336
Rubber Imports and Consumption Lower 338

FEATURES and DEPARTMENTS

Improved Rubber Mixing Rolls—Part 2 344
Dunlop Makes Notable Progress 347
Using Hard Rubber in Silk Dyeing 349
Testing Cord Tire Variability 351
Better Tires Lower Rubber Consumption 352
Dubosc Series on Vulcanization and Accelerators 353
London Letter—"Get Your Stop Watch" 341
Editorial Comment 343
Technical Abstracts 356
Book Review Desk 340
Book Department 368

MARKETS and STATISTICS

Statistics 357
Cotton and Fabric Market 362
Crude, Scrap and Reclaimed Rubber 364
Chemicals and Compounding Materials 366

ADVERTISING INDEX 369
MARKET PLACE LISTINGS 361, 363, 365, 367

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With the Editor

As this issue goes to press, great interest is centered in the possibility of a changed basis for rubber restriction after July 31 when the current restriction quarter will end. THE GENTLEMAN FROM MINCING LANE in his regular London Letter reports the dramatic closeness of the situation under the suggestion—"Get Your Stop-Watch". It appears that this bit of advice will be apt. If the average price in London during the quarter should fall one ten-thousandth under 21 pence, British rubber producing colonies will be put back on an 80 per cent exportation schedule. The price now hovers so slightly above the pivotal price of 21 pence that the last few hours or minutes of trading on July 31 will in reality decide the whole matter, and the use of a stop-watch may be in order. Read the Gentleman's letter on Page 341 and see how closely he keeps tab on London's rubber street.

* * *

Rubber machinery designers and engineers will be interested in the discussion continued in this issue of *Improvements in Rubber Mixing Rolls.* This review of recent developments in mill equipment is complete and timely and everyone interested in mixing will be benefitted by reading it carefully.